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FERTILIZER REPORT
1931

JAMES W. KELLOGG,
Director—Chief Chemist
BUREAU OF FOODS AND CHEMISTRY

JOHN A. MCSPARRAN, *Secretary of Agriculture*

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FERTILIZER REPORT—1931

The Fertilizer Law, Act of May 1st, 1909, as amended, regulates the sale of and defines Commercial Fertilizers as including every substance sold for fertilizing and manurial purposes, except the dung of domestic animals, marl, lime and wood ashes. Registration is required for each calendar year or portion thereof and before being offered for sale for each kind and brand of Commercial Fertilizer and all sacks or attached cards are required to be printed with the following: Net weights, brand or trade names, names and addresses of Manufacturers or Importers and guarantees for the minimum percentage of each of the following constituents: (a) Nitrogen; (b) total phosphoric acid, except in mixed fertilizers; (c) available phosphoric acid; (d) potash soluble in distilled water. All Fertilizers are required to contain not less than 1 per cent. of nitrogen, or 1 per cent. of available phosphoric acid or 1 per cent. of potash and mixed Fertilizers not less than 14 units, or 14 per cent., of total plant food, namely, not less than 1 per cent. of nitrogen; 1 per cent. of available phosphoric acid and 1 per cent. of potash. All guarantees for these constituents in the case of mixed Fertilizers must be in even units or percentages, no fractional guarantees being permitted. Any Fertilizer with a brand or trade name including the word "tobacco" is required to contain potash in the form of sulphate of potash.

The number of tons of each kind and brand of Fertilizer sold annually during the preceding year is required to be reported with applications for registration. These tonnage reports should be submitted for all brands, regardless of whether or not certain of them will be discontinued or re-registered, the basis of registration fees for re-registered brands being determined on the amount of tonnage sales reported.

In order that the requirements of the law may become effective and the sale of Fertilizers properly regulated, provision is made for enforcement by authorizing the collection and analysis of official samples, the publication of the results obtained for the information of the public and by making it unlawful for selling agents to sell Fertilizers which fail to meet the guarantees claimed for labeled and registered constituents and for failing to effect registration.

During the Spring and Fall shipping seasons of 1931 the Special Agents collected from selling agencies throughout the Commonwealth 2,399 official samples, which, together with reports covering each shipment or lot sampled and showing information printed upon sacks or attached cards, including sales conditions, were submitted for examination. Of this number 2,160, representing 709 brands, registered by 74 manufacturing and jobbing firms, were analyzed for the forms of plant food constituents which they were guaranteed to contain, representing 6 classes, which, together with the number of brands and samples in each class, were as follows:

	Brands	*Samples*
Complete Fertilizers	490	1506
Ground Bone Fertilizers	32	67
Superphosphate Fertilizers	71	294
Lime Phosphate Fertilizers	10	32
Rock and Potash Fertilizers	43	128
Miscellaneous Fertilizers	63	133
Totals	709	2160

BRANDS REGISTERED AND TONNAGE SALES

Registration or license fees are required to be paid of from $15 to $50 for each kind or brand registered, as follows: $15 for each new brand and also for each brand re-registered where the tonnage sales during a preceding year did not exceed 150 tons. The remaining fees for re-registered brands, based on tonnage reports, are as follows: 150 to 250 tons, $20; 250 to 400 tons, $30; 400 to 500 tons, $40; and over 500 tons, $50 for each brand.

The Fertilizer applications for registration received and approved for 1931 sales, for which 209 licenses were issued to 134 manufacturing and importing firms, covered 1,149 different kinds and brands of Fertilizers. Of the total number of brands, 548 were mixed Fertilizers, guaranteed to contain, as required by the law, 14 per cent., or 14 total units of plant food, the remaining brands, including "simple" or "base" materials, supplying either nitrogen, phosphoric acid or potash.

The tonnage reports submitted with 1931 registration applications showed that during the preceding year, 1930, 333,715 tons of Fertilizers were sold, the amount of each class being as follows: Complete Fertilizers, 237,970 tons; Ground Bone Fertilizers, 3,451 tons; Superphosphate and Lime Phosphate Fertilizers, 68,160 tons; Rock and Potash Fertilizers, 15,305 tons, and Miscellaneous Fertilizers, including the following: Tankage, 2,027 tons; Dried Blood, 8 tons; Nitrate of Soda, 3,529 tons; Potash Salts, 1,506 tons; Sulphate of Ammonia, 1,108 tons; Ammoniated Phosphates, 33 tons, and unclassified 538 tons. The amount of Fertilizer reported as being sold during 1930, compared with the amount of 332,396 tons, reported as sold during 1929, shows a decrease of 1,319 tons.

An estimate of the amount of each kind of plant food supplied by the Fertilizers sold during 1930, on the basis of guarantees included in registrations, shows that approximately 7,148 tons of nitrogen, 35,746 tons of total and available phosphoric acid and 14,714 tons of water soluble potash, or a total of 57,608 tons of plant food, were disposed of during the preceding year. This total amount of plant food, compared with that reported of 56,901 tons, sold during 1929, shows an increase of 707 tons, which may be explained by an increase in the percentage proportion of plant constituents guaranteed, even though the total tonnages showed a decrease.

CONCLUSIONS

The Fertilizer Law was amended June 22, 1931, requiring guarantees for nitrogen instead of for both nitrogen and ammonia and in the case of mixed Fertilizers guarantees for nitrogen, available phosphoric acid and potash in even units, discontinuing guarantees for total phosphoric acid and uneven unit guarantees. This amendment became effective September 1st, 1931, and, therefore, the Fertilizers registered and sold during 1931 were, for the most part, guaranteed as required previous to the revised method of procedure. Accordingly the Tables, showing the results of chemical analyses accompanying this report, include both found and guaranteed total phosphoric acid in both even and uneven figures in the case of mixed Fertilizers.

Of the 2,160 official samples analyzed, 281, or 13.0 per cent., were deficient in one or more forms of plant food, compared with guarantees, to the extent of .2 per cent. or more, and .1 per cent. or more in the case of guarantees of .50 per cent. or less. This proportion of deficiencies was close to the 12.7 per cent. variations reported for 1930. Considering the plant food constituents separately, 57, or 3.4 per cent., of the samples were deficient in nitrogen, 9, or 11.3 per cent., in total phosphoric acid, 84, or 4.3 per cent., in available phosphoric acid and 151, or 9.1 per cent., in potash.

More than one-half of the Fertilizers, 1,506 samples and 490 brands, were Complete Fertilizers, supplying nitrogen, available phosphoric acid and potash, and 224, or 14.9 per cent., failed to meet their guarantees, 3.2 per cent. being deficient in nitrogen, 4.7 per cent. in available phosphoric acid and 8.3 per cent. in potash. There were 1,479 samples in which the potash was supplied as muriate, 14 as sulphate and 13 in which both muriate and sulphate of potash were supplied. Only 4 samples included the word "tobacco" in the brand name and the potash was supplied in the sulphate form, as required. The average selling retail value was estimated as $30.31, compared with $33.94 a ton, as averaged for 1930. There were 93 different formula grades of mixed Fertilizers supplying nitrogen equivalent to ammonia from 1 to 12 per cent., from 4 to 30 per cent. available phosphoric acid and from 1 to 14 per cent. potash. As these materials were sold before the revision of the law the first figure of the formula grade represents ammonia instead of nitrogen. The grades which, apparently, were sold in greater amounts, judging from the shipments sampled where the samples and brands were represented in larger proportion, which were practically the same grades as in 1930, together with average selling values, were as follows:

Formulas	*Samples*	*Brands*	*Selling Price*
1- 9-4	180	41	$23.99
2- 8-5	232	50	25.47
2- 8-10	163	48	29.90
2- 9-3	72	23	26.15
2-12-2	58	19	26.41
2-12-4	115	24	27.63
2-12-6	27	12	30.03
2-16-8	18	8	33.55
3-10-6	43	15	31.34
3-12-5	17	8	29.49
4- 8-4	21	9	31.37
4- 8-6	32	8	32.39
4- 8-7	129	36	32.55
4-12-4	29	11	32.83

Formulas	*Samples*	*Brands*	*Selling Price*
4-16-4	40	12	36.19
4-16-10	24	10	46.05
5- 8-5	24	12	35.40
5-10-5	17	6	37.62

The results of analyses of the Ground Bone Fertilizers showed that 12, or 17.9 per cent., were deficient, 9.0 per cent. being deficient in nitrogen and 10.5 per cent. in total phosphoric acid. There were 8, or 2.7 per cent., of the samples of Superphosphate Fertilizers and 2, or 6.3 per cent., of the Lime Phosphate Fertilizers, which were deficient in available phosphoric acid. In the case of the Rock and Potash Fertilizers 22, or 17.2 per cent., failed to meet their guarantees, 3.1 per cent. being deficient in available phosphoric acid and 14.1 per cent. in potash. The 133 Miscellaneous Fertilizers included the following: 48 samples of Nitrate of Soda, 30 of Sulphate of Ammonia, 1 of Ground Blood, 13 of Tankage, 3 of Kainit, 28 of Muriate of Potash, 2 of Sulphate of Potash and 8 samples of unclassified materials. Of this class 13, or 9.8 per cent., failed to meet their guarantees and 2.3 per cent. were deficient in nitrogen, 1.5 per cent. in total phosphoric acid and 6.0 per cent. in potash.

The retail selling prices estimated for the various classes of Fertilizers were considerably lower than the averages estimated for the same classes included in the 1930 Report. The average unit values estimated from the average retail selling prices gave the following: $3.46 for nitrogen, $1.00 for available phosphoric acid and $2.02 for water soluble potash. The retail selling prices, together with averages for each class, will be found in the accompanying Tables.

In spite of the deficiencies reported the Fertilizers, as a rule, quite satisfactorily met their guarantees although there was room for improvement with respect to showing correct guarantees. Registration applications were not as promptly nor completely submitted as is desirable, there being a larger proportion of delinquents in effecting registration than formerly, making it necessary to hold dealers responsible for continuing to sell non-registered materials.

TABLE I—DEFICIENCIES

Complete Fertilizers	1,506	48	70	125
Ground Bone Fertilizers	67	6	7*	...
Superphosphate Fertilizers	294	..	8	...
Lime Phosphate Fertilizers	32	..	2	...
Rock and Potash Fertilizers	128	..	4	18
Miscellaneous Fertilizers	133	3	2*	8
Total	2,160	57	93	151

*Total Phosphoric Acid.

TABLE II—AVERAGE ANALYSES AND RETAIL PRICES

Nitrogen	2.35	3.10	......	......
Total Phosphoric Acid	11.23	24.60	19.03	13.28
Available Phosphoric Acid	10.39	......	18.11	12.45
Insoluble Phosphoric Acid	0.84	......	0.92	0.83
Potash	5.84	......	......	5.76
Selling Price—1931	$30.31	$47.92	$18.08	$24.09
Average Selling Price—1930	$33.94	$55.32	$20.00	$26.44

*Excluding Lime Phosphate Fertilizers.

KEY TO TABLES

The following tables include the results of chemical analyses of the official samples. Each sample was given a chemist's number and analyzed for nitrogen, total and available phosphoric acid and water soluble potash.

In order to economize a change has been made in the method of preparing tables, showing results of chemical analyses so that instead of the detailed analyses of each sample analyzed, where two or more samples of the same brand were examined and which met the claimed guarantees, the results were averaged. Therefore, the results of analyses shown in the tables will include samples representing single brands, averages of two or more samples of the same brand and the results of separate samples which failed to meet their guarantees. The chemist's numbers, for the samples listed and included in the averages, will be found in parenthesis after the brand names. They are grouped in alphabetical order of manufacturers and brand names with names and addresses of manufacturers or jobbers. The list of the names of selling agents has been discontinued.

The asterisk (*) indicates the cases where total nitrogen, available phosphoric acid and total potash were deficient to the extent of .2 per cent. or more below their respective guarantees.

Order of results of analyses: Total Nitrogen found and guaranteed; Total Phosphoric Acid found and guaranteed; Available Phosphoric Acid found and guaranteed; Insoluble Phosphoric Acid found and guaranteed and Potash as Muriate. In those cases where Potash listed as Muriate is less than the total Potash, the balance is in the form of Sulphate of Potash. Where there is a blank included in the Muriate column instead of figures, all of the Potash is in the form of Sulphate of Potash.

To determine the formula of any brand, as guaranteed, multiply Total Nitrogen guaranteed by 1.2158 to obtain Ammonia and then use this figure and the guarantees for Available Phosphoric Acid and Total Potash. For example, Nitrogen guarantee equals .82% (.82 × 1.2158 = 1%). Ammonia equals 1%; Available Phosphoric Acid, 8%; Potash, 5%. Formula therefore is 1-8-5.

Table III. Complete Fertilizers, furnishing Nitrogen, Available Phosphoric Acid and Potash.

Table IV. Ground Bone Fertilizers, furnishing Nitrogen and Total Phosphoric Acid.

Table V. Superphosphate and Lime Phosphate Fertilizers, furnishing Available Phosphoric Acid.

Table VI. Rock and Potash Fertilizers, furnishing Available Phosphoric Acid and Potash.

Table VII. Miscellaneous Fertilizers, including Nitrate of Soda, Sulphate of Ammonia, Dried Blood, Tankage, Kainit, Muriate of Potash, Sulphate of Potash and 8 unclassified fertilizers.

TABLE III. ANALYSES OF SAMPLES OF COMPLETE FERTILIZERS — FURNISHING NITROGEN, PHOSPHORIC ACID AND POTASH

MANUFACTURER AND BRAND NAME	NITROGEN		PHOSPHORIC ACID						POTASH		
			Total		Available		Insoluble				
	Found	Guar.	Found	Guar.	Found	Guar.	Found	Guar.	Found	Guar.	As Muriate
	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.
THE AMERICAN AGRICULTURAL CHEMICAL CO., New York, N. Y.											
AA Acme Fertilizer (3980; 4225; 4308; 4763; 4266; 2629; 2865; 3310; 4005; 4674; 2660; 3730; 4600)	0.92	0.82	10.74	9.50	9.76	9.00	0.98	0.50	4.14	4.00	4.14
AA Champion Fertilizer (4222; 4783; 3321; 3874; 3745)	1.73	1.85	9.80	8.50	8.65	8.00	1.15	0.50	5.11	5.00	5.11
AA Champion Fertilizer (3296)	1.74	1.65	9.57	8.50	*7.63	8.00	1.94	0.50	5.11	5.00	5.11
AA Climax Fertilizer (4771)	2.51	2.47	10.55	10.50	10.11	10.00	0.44	0.50	6.05	6.00	6.05
AA Country Club Fertilizer (3927)	*7.93	8.23	7.68	6.50	7.04	6.00	0.64	0.50	4.22	4.00	4.22
AA Double Strength Fertilizer (4774)	1.78	1.65	16.40	16.50	*15.80	16.00	0.60	0.50	8.50	8.00	8.50
AA Double Strength Fertilizer (4596)	1.89	1.65	17.73	16.50	16.69	16.00	1.04	0.50	8.21	8.00	8.21
AA Early Trucker Fertilizer (3955)	4.15	4.11	8.93	8.50	8.17	8.00	0.76	0.50	5.00	5.00	5.00
AA Farmers' Friend Fertilizer (4582; 4637; 4448; 4213; 3811; 4775; 3311; 3392; 3728)	1.71	1.65	13.87	12.50	12.79	12.00	1.08	0.50	4.14	4.00	4.14
AA Fish Brand (3479; 4019; 4627)	1.73	1.65	11.18	9.50	9.61	9.00	1.57	0.50	3.23	3.00	3.23
AA Gladiator Fertilizer (4057; 2520; 3415; 2683; 4215; 3094; 3544)	3.35	3.29	9.77	8.50	8.75	8.00	1.02	0.50	7.13	7.00	7.13
AA Gladiator Fertilizer (3322)	3.37	3.29	8.55	8.50	*7.65	8.00	0.90	0.50	7.11	7.00	7.11
AA High Test 4-16-10 Fertilizer (4545)	3.15	3.29	16.57	16.50	15.89	18.00	0.68	0.50	10.58	10.00	10.58
AA High Test 10-20-10 Fertilizer (3972)	*7.71	8.23	19.57	20.50	*19.14	20.00	0.43	0.50	9.96	10.00	9.96
AA Homestead Fertilizer (3305)	1.65	1.65	13.89	12.50	11.95	12.00	1.94	0.50	2.22	2.00	2.22
AA Kangaroo Komplete Kompound (3919; 4007; 2517; 4309; 2690)	1.76	1.65	10.89	9.50	9.65	9.00	1.24	0.50	3.40	3.00	3.40
AA Monarch Fertilizer (4049)	3.27	3.29	9.04	8.50	8.02	8.00	1.02	0.50	4.35	4.00	4.35
AA Old Hickory Fertilizer (4278; 2511; 2518; 4619; 4346; 4246; 3324; 3741; 4778; 2881; 3843; 4006)	1.75	1.85	9.58	8.50	8.67	8.00	0.91	0.50	10.28	10.00	10.28
AA Old Hickory Fertilizer (4129)	2.14	1.65	10.54	8.50	8.76	8.00	1.78	0.50	*9.39	10.00	9.39
AA Old Hickory Fertilizer (4516)	1.63	1.65	9.90	8.50	8.90	8.00	1.00	0.50	*9.07	10.00	9.07
AA Pathfinder Fertilizer (4214; 4768)	3.22	3.29	14.00	12.50	12.70	12.00	1.30	0.50	4.24	4.00	4.24
AA Red Dog Fertilizer (3113; 4385; 4638; 4265; 2548; 3806; 3252; 4517; 2662; .4475)	1.75	1.65	9.86	8.50	8.75	8.00	1.11	0.50	5.12	5.00	5.12
AA Red Dragon Fertilizer (3549; 4652)	1.75	1.85	14.29	12.50	12.82	12.00	1.47	0.50	2.35	2.00	2.35
AA Red Letter Fertilizer (4476)	3.35	3.29	13.73	12.50	12.77	12.00	0.96	0.50	6.09	6.00	4.70
AA Red Seal Fertilizer (2682)	3.95	4.11	10.13	8.50	9.55	8.00	0.58	0.50	*6.79	7.00	6.79
AA Sweepstakes Fertilizer (2519)	1.82	1.65	11.83	10.50	10.69	10.00	0.94	0.50	6.72	6.00	6.72
AA Two-In-One Fertilizer (3550; 4223; 4087; 3166; 4597)	3.36	3.29	18.41	16.50	17.02	16.00	1.39	0.50	4.30	4.00	4.30
Agrico for Corn (2803; 2641; 2523; 3350; 4653; 3744; 3726; 2862; 3644)	2.81	2.47	11.76	10.50	10.94	10.00	0.82	0.50	6.20	6.00	6.20
Agrico for Grain (2804; 2643; 4384; 2524; 3349; 4042;4765; 4347; 4292; 2546; 4615; 4544; 2860; 4754; 3842; 4726; 4406)	1.78	1.65	13.68	12.50	12.82	12.00	0.88	0.50	4.11	4.00	4.11
Agrico for Pastures and Top Dressing (2889; 3465)	6.75	6.58	7.38	6.50	6.71	6.00	0.67	0.50	6.02	6.00	6.02
Agrico for Pastures and Top Dressing (3579)	7.30	6.58	7.70	6.50	6.90	6.00	0.80	0.50	*5.74	6.00	5.74
Agrico for Potatoes (2802; 2642;2888; 2697; 2545; 3743; 4548; 3251; 4680; 3926)	3.40	3.29	9.51	8.50	8.88	8.00	0.63	0.50	6.26	6.00	6.26
Agrico for Potatoes (3581)	3.37	3.29	9.91	8.50	9.07	8.00	0.84	0.50	*5.59	6.00	5.59
Agrico for Tomatoes (4088; 3821)	3.52	3.29	16.01	14.50	14.89	14.00	1.12	0.50	6.77	6.00	6.77
Agrico for Truck (2801; 4043; 3137; 2691; 2863; 4661; 3545)	4.20	4.11	11.59	10.50	10.75	10.00	0.84	0.50	5.25	5.00	5.25
Agrico for Truck (4784)	5.34	4.11	9.98	10.50	*9.50	10.00	0.48	0.50	5.56	5.00	5.56
Bakers Special Fertilizer (4279; 4386; 2647; 2685; 3542)	0.94	0.82	11.15	9.50	9.85	9.00	1.30	0.50	4.04	4.00	4.04
Bowker's Challenge Fertilizer (3884; 3959)	1.72	1.65	9.26	8.50	8.31	8.00	0.95	0.50	10.23	10.00	10.23
Bowker's Square Brand Fertilizer (4568; 4319; 3645)	1.67	1.85	9.92	8.50	8.66	8.00	1.26	0.50	5.07	5.00	5.07
Bowker's Stockbridge Rill and Drill Fertilizer (4321)	3.24	3.29	10.12	8.50	9.44	8.00	0.68	0.50	*6.75	7.00	6.75
Bowker's Sure Crop Fertilizer (3005; 4566; 4320; 4436; 3164; 2887; 3960)	0.99	0.82	10.96	9.50	9.77	9.00	1.19	0.50	4.30	4.00	4.30
E. Frank Coe's Antler Fertilizer (4219)	0.88	0.82	10.06	9.50	9.02	9.00	1.04	0.50	3.98	4.00	3.98
E. Frank Coe's Arrow Fertilizer (3404)	1.68	1.65	9.71	8.50	8.75	8.00	0.96	0.50	10.14	10.00	10.14
E. Frank Coe's Columbian Fertilizer (4218; 3964; 3170; 3400)	1.72	1.65	9.59	8.50	8.50	8.00	1.09	0.50	5.05	5.00	5.05
E. Frank Coe's Columbian Fertilizer (4724)	1.70	1.65	8.28	8.50	*7.52	8.00	0.76	0.50	5.00	5.00	5.00
E. Frank Coe's Gold Brand Fertilizer (4220; 3925; 4722)	2.57	2.47	11.42	10.50	10.09	10.00	1.33	0.50	6.15	6.00	6.15
E. Frank Coe's Red Brand Fertilizer (3928)	3.29	3.29	9.26	8.50	7.94	8.00	1.32	0.50	7.57	7.00	7.57
Hess Laurel Fertilizer (2695; 4290)	1.81	1.65	10.07	8.50	8.62	8.00	1.45	0.50	5.12	5.00	5.12
Hess Little Treasure Fertilizer (2644; 2699; 4294)	0.89	0.82	11.20	9.50	10.13	9.00	1.07	0.50	4.10	4.00	4.10
Hess Possum Brand Fertilizer (4407)	1.59	1.65	9.41	8.50	8.25	8.00	1.16	0.50	9.82	10.00	9.82

*Deficient

TABLE III. ANALYSES OF SAMPLES OF COMPLETE FERTILIZERS — FURNISHING NITROGEN, PHOSPHORIC ACID AND POTASH

MANUFACTURER AND BRAND NAME	NITROGEN		PHOSPHORIC ACID						POTASH		
			Total		Available		Insoluble				
	Found	Guar.	Found	Guar.	Found	Guar.	Found	Guar.	Found	Guar.	As Muriate
	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.
Lister's G Brand Fertilizer (4368; 3048; 4610; 3577; 3319; 4807; 3933)	0.93	0.82	10.83	9.50	9.79	9.00	1.04	0.50	4.06	4.00	4.06
Lister's Golden Crown Fertilizer (3547; 3932)	1.71	1.65	9.91	8.50	8.67	8.00	1.24	0.50	10.21	10.00	10.21
Lister's Golden Crown Fertilizer (3047)	2.11	1.65	10.26	8.50	8.60	8.00	1.66	0.50	*9.49	10.00	9.49
Lister's Harvest Queen Fertilizer (4366; 3576; 2689; 4594; 3320; 4662; 4487)	1.75	1.65	9.93	8.50	8.75	8.00	1.18	0.50	5.19	5.00	5.19
Lister's Harvest Queen Fertilizer (3931)	1.85	1.65	9.48	8.50	*7.66	8.00	1.82	0.50	5.20	5.00	5.20
Lister's Sovereign Fertilizer (3546; 4488; 4645)	1.72	1.65	13.81	12.50	12.37	12.00	1.44	0.50	4.37	4.00	4.37
Lister's Success Fertilizer (3813; 4806; 4443)	1.72	1.65	10.63	9.50	9.59	9.00	1.04	0.50	3.39	3.00	3.39
Mixed-To-Order (4671)	6.95	-----	17.30	----	16.78	----	0.52	----	*13.06	14.00	13.06
Patapsco Big Chief Fertilizer (4286; 2686; 3543)	1.70	1.65	10.09	8.50	8.90	8.00	1.19	0.50	5.04	5.00	5.04
Patapsco Coon Brand Fertilizer (3297; 2705; 2707; 4287; 3323; 4804; 2725; 4446; 4755; 3721)	0.93	0.82	10.60	9.50	9.74	9.00	0.86	0.50	4.11	4.00	4.11
THE AMERICAN SODA PRODUCTS CO., Moorestown, N. J.											
Gro-Green Fertilizer (2581)	3.11	3.00	12.09	----	11.45	8.00	0.64	----	3.01	3.00	3.01
ARMOUR FERTILIZER WORKS, Baltimore, Md.											
Armour's Big Crop 1-9-4 Fertilizer (2881; 3793; 4689; 3823; 2720; 3907; 3066; 4801; 4322; 3345; 4445)	0.97	0.82	9.78	9.50	9.49	9.00	0.29	0.50	4.17	4.00	4.17
Armour's Big Crop 1-9-4 Fertilizer (4609)	0.87	0.82	9.35	9.50	*8.51	9.00	0.84	0.50	4.22	4.00	4.22
Armour's Big Crop 2-8-5 Fertilizer (2842; 4686; 4781; 3822; 2722; 4449; 3677; 4604; 3332; 4419)	1.74	1.65	8.99	8.50	8.55	8.00	0.44	0.50	5.07	5.00	5.07
Armour's Big Crop 2-8-5 Fertilizer (2758)	1.73	1.65	8.92	8.50	8.62	8.00	0.30	0.50	*4.50	5.00	4.50
Armour's Big Crop 2-8-10 Fertilizer (2841; 4780; 3198; 3948; 4011)	1.73	1.65	8.96	8.50	8.50	8.00	0.46	0.50	10.22	10.00	10.22
Armour's Big Crop 2-8-10 Fertilizer (3348)	1.54	1.65	8.36	8.50	*7.76	8.00	0.60	0.50	10.84	10.00	10.84
Armour's Big Crop 2-9-3 Fertilizer (4654)	1.63	1.65	9.53	9.50	9.09	9.00	0.44	0.50	3.15	3.00	3.15
Armour's Big Crop 2-12-2 Fertilizer (2880; 2840; 4003; 4605; 4353; 3346)	1.71	1.65	13.21	12.50	12.67	12.00	0.54	0.50	2.37	2.00	2.37
Armour's Big Crop 2-12-4 Fertilizer (3521; 4004; 3334; 4031; 2726)	1.82	1.65	13.16	12.50	12.53	12.00	0.63	0.50	4.32	4.00	4.32
Armour's Big Crop 2-16-8 Fertilizer (4328; 4687; 4235; 4456; 3114; 2721; 2750; 4762; 3448)	1.72	1.65	17.65	16.50	17.17	16.00	0.48	0.50	8.29	8.00	8.29
Armour's Big Crop 4-8-12 Fertilizer (3520)	3.45	3.29	9.64	8.50	9.24	8.00	0.40	0.50	12.02	12.00	12.02
Armour's Big Crop 4-12-8 Fertilizer (4782)	3.42	3.29	13.18	12.50	12.58	12.00	0.60	0.50	8.85	8.00	8.85
Armour's Big Crop 4-16-4 Fertilizer (2874; 4685; 4234; 2761; 2749; 4752; 3945; 4743)	3.43	3.29	17.45	16.50	16.95	16.00	0.50	0.50	4.31	4.00	4.31
Armour's Big Crop 4-16-10 Fertilizer (4684; 3997; 4056; 3344)	3.42	3.29	17.29	16.50	16.45	16.00	0.84	0.50	10.22	10.00	10.22
Armour's Big Crop 4-16-10 Fertilizer (3876)	3.45	3.29	17.49	16.50	16.45	16.00	1.04	0.50	*9.80	10.00	9.80
Armour's Big Crop 5-8-5 Fertilizer (3947; 3908)	4.22	4.11	9.24	8.50	8.67	8.00	0.57	0.50	5.19	5.00	5.19
Armour's Big Crop 5-8-5 Fertilizer (3792)	4.15	4.11	8.89	8.50	8.01	8.00	0.88	0.50	*4.68	5.00	4.68
Armour's Big Crop 5-8-5 Fertilizer (3676)	4.11	4.11	9.30	8.50	8.68	8.00	0.62	0.50	*4.75	5.00	4.75
Armour's Big Crop 5-15-5 Fertilizer (2907; 3613)	4.15	4.11	16.24	15.50	15.57	15.00	0.67	0.50	5.30	5.00	5.30
Armour's Big Crop 7-12-7 Fertilizer (3763; 3160; 3946; 4744)	5.74	5.76	13.35	12.50	13.09	12.00	0.26	0.50	7.15	7.00	7.15
Armour's Big Crop High Grade Potato (3880)	1.79	1.65	8.98	8.50	8.02	8.00	0.96	0.50	10.20	10.00	10.20
Armour's Big Crop Potato Grower (2882; 2839; 2715; 2760; 3909; 2933; 2752; 2910)	3.42	3.29	9.25	8.50	8.74	8.00	0.51	0.50	7.13	7.00	7.13
Armour's Big Crop Potato Grower (3045)	3.58	3.29	9.12	8.50	8.36	8.00	0.76	0.50	*6.79	7.00	6.79
Armour's Big Crop Potato Grower (4745)	3.33	3.29	8.87	8.50	8.51	8.00	0.36	0.50	*6.69	7.00	6.69
Armour's Big Crop Royal Ammoniated (3528)	1.14	0.82	10.33	9.50	9.79	9.00	0.54	0.50	4.21	4.00	4.21
Armour's Big Crop Special Mixture (2759; 4030)	1.71	1.65	10.73	9.50	9.66	9.00	1.07	0.50	3.43	3.00	3.43
Armour's Big Crop Tomato Grower (3949; 2911)	2.61	2.47	11.22	10.50	10.56	10.00	0.66	0.50	6.04	6.00	6.04
Armour's Big Crop Tomato Grower (3333)	2.69	2.47	11.14	10.50	10.30	10.00	0.84	0.50	*5.75	6.00	5.75
Armour's Big Crop Tomato Grower (3356)	2.74	2.47	10.59	10.50	9.93	10.00	0.66	0.50	*5.61	6.00	5.61
Armour's Lawn and Garden Grower (3761; 2578)	5.07	5,00	15.45	8.50	9.92	8.00	5.53	0.50	6.43	6.00	3.50
Armour's Special Turf Mixture (3158; 4746)	10.00	9.87	8.72	8.50	8.57	8.00	0.15	0.50	6.22	6.00	2.90
Armour's Special Turf Mixture (4355)	*9.43	9.87	8.79	8.50	8.63	8.00	0.16	0.50	*4.79	6.00	4.79
Armour's Special Turf Mixture (3065)	*8.70	9.87	9.32	8.50	9.06	8.00	0.26	0.50	5.86	6.00	3.20
Armour Vert (4033)	5.27	5.00	16.19	8.50	10.47	8.00	5.72	0.50	6.67	6.00	6.67
N. P. K. 9-27-9 (3866)	*8.23	9.00	24.35	27.50	*23.67	27.00	0.68	0.50	9.01	9.00	9.01
N. P. K. 9-27-9 (3451)	*8.66	9.00	28.24	27.50	27.81	27.00	0.43	0.50	8.94	9.00	8.94

*Deficient

TABLE III. ANALYSES OF SAMPLES OF COMPLETE FERTILIZERS — FURNISHING NITROGEN, PHOSPHORIC ACID AND POTASH

MANUFACTURER AND BRAND NAME	NITROGEN		PHOSPHORIC ACID						POTASH		
	Found	Guar.	Total		Available		Insoluble		Found	Guar.	As Muriate
			Found	Guar.	Found	Guar.	Found	Guar.			
	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.
BALTIMORE FERTILIZER CO., Baltimore, Md.											
Honest 1-9-4 (2474; 4163)	1.00	0.82	11.39	9.50	11.04	9.00	0.35	0.50	4.72	4.00	4.72
Honest 2-8-5 (2476; 4162)	1.74	1.64	9.71	8.50	9.19	8.00	0.52	0.50	5.29	5.00	5.29
Ronest 2-8-10 (4166)	1.83	1.64	10.20	8.50	9.56	8.00	0.64	0.50	10.04	10.00	10.04
Ronest 4-8-7 (2475)	3.10	3.28	8.92	8.50	8.72	8.00	0.20	0.50	7.79	7.00	7.79
Old Honesty (2477; 4165)	0.98	0.82	12.91	11.50	12.24	11.00	0.67	0.50	3.07	2.00	3.07
BAUGH & SONS COMPANY, Philadelphia, Pa.											
Baughgro (3923; 2584)	3.59	3.30	13.75	12.25	12.78	12.00	0.97	0.25	4.46	4.00	4.46
Baughgro (3863)	3.21	3.30	16.05	12.25	15.09	12.00	0.96	0.25	*3.61	4.00	3.61
Baugh's 2-16-8 (3760)	1.80	1.65	18.08	16.00	16.44	16.00	1.64	----	8.41	8.00	8.41
Baugh's Animal Base and Potash Compound (3352; 3236)	1.76	1.65	10.91	9.00	9.74	9.00	1.17	----	3.08	3.00	3.08
Baugh's Balanced Plant Food (4464; 4082; 2529; 2959)	3.40	3.30	13.92	12.00	12.67	12.00	1.25	----	4.25	4.00	4.25
Baugh's Commercial Crop Compound (4580; 2730; 4410; 4712;3122; 2532;2960)	1.75	1.65	9.58	8.00	8.66	8.00	0.92	----	10.42	10.00	10.42
Baugh's Commercial Crop Compound (3351)	1.82	1.65	10.18	8.00	9.02	8.00	1.16	----	*9.31	10.00	9.31
Baugh's Commercial Crop Compound (4706)	1.65	1.65	9.93	8.00	8.85	8.00	1.08	----	*9.77	10.00	9.77
Baugh's Complete Animal Base Fertilizer (2485; 4375; 3635; 4240; 4409; 4418; 4707; 3121; 2772; 4692; 2534; 3862; 4650; 2877)	1.72	1.65	9.71	8.00	8.71	8.00	1.00	----	5.24	5.00	5.24
Baugh's Complete Pasture Fertilizer (3219; 2530)	5.88	5.76	7.46	6.00	6.66	6.00	0.80	----	5.05	5.00	5.05
Baugh's Corn and Oats Fertilizer (2904; 3636; 4081; 2527; 2961)	1.81	1.65	13.98	12.00	12.71	12.00	1.27	----	2.31	2.00	2.31
Baugh's Double Eagle Phosphate (3844; 4641: 4577; 4374; 3571; 4411; 4100; 4802; 4708; 4013; 2876)	1.75	1.65	13.99	12.00	12.84	12.00	1.15	----	4.26	4.00	4.26
Baugh's Double Power Fertilizer (2903; 2734; 4239; 3978; 3123; 2774)	3.25	3.30	18.12	16.00	17.08	16.00	1.04	----	4.17	4.00	4.17
Baugh's Excelsior Guano (3846; 3172; 4584; 4372; 4238; 4703; 3118; 4691; 2771; 4792; 4520)	0.94	0.82	10.69	9.00	9.62	9.00	1.07	----	4.29	4.00	4.29
Baugh's Excelsior Guano (2486)	0.86	0.82	10.92	9.00	10.08	9.00	0.84	----	*3.71	4.00	3.71
Baugh's Fish, Bone and Potash (3634)	3.38	3.30	10.05	8.00	9.03	8.00	1.02	----	4.04	4.00	4.04
Baugh's Fish Mixture (2732; 2483; 2958; 4562)	1.84	1.65	10.87	9.00	10.10	9.00	0.77	----	3.37	3.00	3.37
Baugh's Grand Rapid Guano (3233)	2.67	2.47	12.02	10.00	10.98	10.00	1.04	----	3.63	3.00	3.63
Baugh's Half and Half Mixture with Potash (4394)	1.48	1.23	17.11	17.00	12.67	10.00	4.44	7.00	5.16	5.00	5.16
Baugh's Half Century Perfection Brand (3496; 2728; 2799; 3353; 4693; 2528; 3552; 2962; 2597)	3.36	3.30	10.33	8.00	9.43	8.00	0.90	----	7.18	7.00	7.18
Baugh's Old Dependable Potato Grower (4713)	3.47	3.30	9.63	8.00	9.03	8.00	0.60	----	10.90	10.00	10.90
Baugh's Peruvian Guano Substitute (4112; 3383; 4101; 2956)	4.26	4.12	9.83	8.00	8.75	8.00	1.08	----	5.32	5.00	5.32
Baugh's Potato and Truck Special (3237; 2526)	3.35	3.30	9.27	8.00	8.59	8.00	0.68	----	6.21	6.00	6.21
Baugh's 7% Potato Guano (2480)	*5.29	5.76	7.92	6.00	7.34	6.00	0.58	----	*4.54	5.00	4.54
Baugh's 7% Potato Guano (3243)	5.77	5.76	7.11	6.00	6.11	6.00	1.00	----	5.16	5.00	5.16
Baugh's Special Potato Manure (2729; 2482; 3266; 4099; 3725; 2531)	1.70	1.65	9.76	8.00	8.86	8.00	0.90	----	5.21	5.00	5.21
Baugh's The Old Stand-By Dissolved Animal Base (4581; 4408; 3977; 3116; 4015)	1.89	1.65	13.81	12.00	12.56	12.00	1.25	----	2.50	2.00	2.50
Baugh's Three-Quarter Century Perfection Brand (3218; 4111; 3452)	2.58	2.47	12.21	10.00	10.92	10.00	1.29	----	6.22	6.00	6.22
Baugh's Wheat and Grass (4465)	1.73	1.65	10.14	9.00	9.30	9.00	0.84	----	3.36	3.00	3.36
Baugh's Wheat Fertilizer (4643; 4462; 4579; 3944; 4705; 4519)	1.70	1.65	10.64	9.00	9.86	9.00	0.78	----	3.21	3.00	3.21
BLIND & WILSON FERTILIZER CO., West View, Pa.											
Nomen-Ure (3929)	4.15	4.00	9.35	6.00	8.37	6.00	0.98	----	*2.38	4.00	1.60
Nomen-Ure (4737)	*2.98	4.00	8.11	6.00	7.79	6.00	0.32	----	*1.85	4.00	1.85
W. S. CAPLES & SON, Johnstown, Pa.											
Cambria's Lion Phosphate (3563; 4001)	3.17	3.30	11.44	10.00	9.65	8.00	1.79	2.00	6.78	5.00	6.78
Cambria's Potato and Truck (3562; 4000)	1.50	1.65	11.25	10.00	9.13	8.00	2.12	2.00	6.78	6.00	6,78
Cambria's Standard Phosphate (3560)	*1.42	1.65	14.07	10.00	10.85	8.00	3.22	2.00	5.62	4.00	5.62
Cambria's Standard Phosphate (4492)	1.60	1.65	11.02	10.00	9.38	8.00	1.64	2.00	6.51	4.00	6.51
Cambria's Standard Phosphate (2999)	*1.38	1.65	12.59	10.00	9.87	8.00	2.72	2.00	6.36	4.00	6.36
CARLISLE FERTILIZER WORKS, INC., Carlisle, Pa.											
Carlisle 1-9-4 (2466; 4157)	1.10	0.82	10.28	9.50	9.30	9.00	0.98	0.50	4.57	4.00	4.57

*Deficient

TABLE III. ANALYSES OF SAMPLES OF COMPLETE FERTILIZERS — FURNISHING NITROGEN, PHOSPHORIC ACID AND POTASH

MANUFACTURER AND BRAND NAME	NITROGEN		PHOSPHORIC ACID						POTASH		
			Total		Available		Insoluble				
	Found	Guar.	Found	Guar.	Found	Guar.	Found	Guar.	Found	Guar.	As Muriate
	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.
Carlisle 2-8-5 (2465; 4158)	1.80	1.64	9.62	8.50	8.85	8.00	0.77	0.50	5.37	5.00	5.37
Carlisle 2-8-10 (2464)	1.89	1.64	9.73	8.50	9.51	8.00	0.22	0.50	*9.36	10.00	9.36
Carlisle 4-8-7 (2463; 4154)	3.28	3.28	8.81	8.50	8.43	8.00	0.38	0.50	8.09	7.00	8.09
CENTRAL CHEMICAL COMPANY, INC., Hagerstown, Md.											
Gro-All Big Thirty 4-16-10 (4590)	3.41	3.29	15.93	16.50	*15.53	16.00	0.40	0.50	10.87	10.00	10.87
Gro-All Big Thirty 4-16-10 (4313)	3.14	3.29	16.83	16.50	16.15	16.00	0.68	0.50	*8.82	10.00	8.82
Gro-All Big Thirty 4-16-10 (4565)	3.43	3.29	16.64	16.50	16.24	16.00	0.40	0.50	10.70	10.00	10.70
Gro-All Big Thirty 4-16-10 (3435)	3.41	3.29	15.30	16.50	*14.80	16.00	0.50	0.50	10.28	10.00	10.28
Gro-All Big Twenty 2-11-7 (3031; 3803)	1.89	1.65	12.34	11.50	11.76	11.00	0.58	0.50	7.05	7.00	7.05
Gro-All Big Twenty 2-11-7 (3209)	1.76	1.65	12.08	11.50	*10.68	11.00	1.40	0.50	7.25	7.00	7.25
Gro-All Crown Jewel 1-9-4 (4300; 3208; 2493; 3091; 4205)	1.03	0.82	10.03	9.50	9.30	9.00	0.73	0.50	4.53	4.00	4.53
Gro-All Crown Jewel 1-9-4 (3029)	0.92	0.82	10.29	9.50	*8.21	9.00	2.08	0.50	4.76	4.00	4.76
Gro-All Crown Jewel 1-9-4 (3338)	1.15	0.82	8.81	9.50	*8.58	9.00	0.23	0.50	4.37	4.00	4.37
Gro-All Crown Jewel 1-9-4 (4505)	1.07	0.82	9.99	9.50	*8.67	9.00	1.32	0.50	4.33	4.00	4.33
Gro-All Excelsior 2-8-5 (3035;4301; 2897; 3210; 2495; 4799; 3895; 2645; 4203; 3432)	1.75	1.65	9.09	8.50	8.33	8.00	0.76	0.50	5.42	5.00	5.42
Gro-All Excelsior 2-8-5 (4589)	1.78	1.65	8.70	8.50	*7.70	8.00	1.00	0.50	5.04	5.00	5.04
Gro-All Excelsior 2-8-5 (4497)	2.03	1.65	8.85	8.50	*7.41	8.00	1.44	0.50	6.24	5.00	6.24
Gro-All Fish and Potash 2-9-3 (3849)	1.76	1.65	10.20	9.50	9.42	9.00	0.78	0.50	3.42	3.00	3.42
Gro-All Fish and Potash Compound 1¼-9-4 (3028; 3093; 4092; 4206)	1.12	1.03	10.21	9.50	9.05	9.00	1.16	0.50	4.14	4.00	4.14
Gro-All Golden Sheaf 3-12-5 (3034; 2648; 3437)	2.53	2.47	13.40	12.50	12.58	12.00	0.82	0.50	5.33	5.00	5.33
Gro-All Golden Sheaf 3-12-5 (2896)	2.64	2.47	12.76	12.50	*11.45	12.00	1.31	0.50	5.75	5.00	5.75
Gro-All Golden Sheaf 3-12-5 (3212)	2.82	2.47	12.58	12.50	*10.95	12.00	1.63	0.50	5.40	5.00	5.40
Gro-All Grain and Grass Grower 2-12-2 (3032; 4591; 4185; 4302; 3991; 3473; 2649; 2552; 4208)	1.72	1.65	13.37	12.50	12.50	12.00	0.87	0.50	2.40	2.00	2.40
Gro-All Grain and Grass Grower 2-12-2 (4798)	2.10	1.65	12.87	12.50	*11.55	12.00	1.32	0.50	2.74	2.00	2.74
Gro-All Grain Food 2-12-4 (3030; 4592; 4186; 2895; 3440)	1.79	1.65	13.16	12.50	12.31	12.00	0.85	0.50	4.23	4.00	4.23
Gro-All Grain Food 2-12-4 (3337)	1.85	1.65	12.30	12.50	*11.44	12.00	0.86	0.50	4.38	4.00	4.38
Gro-All Imperial 2-8-10 (3039; 4499; 2899; 3896; 4647)	1.75	1.65	8.90	8.50	8.28	8.00	0.62	0.50	10.41	10.00	10.41
Gro-All Imperial 2-8-10 (3216)	2.05	1.65	9.13	8.50	8.09	8.00	1.04	0.50	*9.70	10.00	9.70
Gro-All Potato Special 4-8-7 (3036; 3990; 2900; 3211; 2494; 4800; 3894;4507)	3.41	3.29	9.10	8.50	8.48	8.00	0.62	0.50	7.25	7.00	7.25
Gro-All Potato Special 4-8-7 (4312)	3.15	3.29	9.80	8.50	9.12	8.00	0.68	0.50	*6.48	7.00	6.48
Gro-All Potato Special 4-8-7 (4496)	*2.87	3.29	11.43	8.50	10.51	8.00	0.92	0.50	*6.32	7.00	6.32
Gro-All Potato Special 4-8-7 (2646)	3.32	3.29	9.78	8.50	9.46	8.00	0.32	0.50	*6.74	7.00	6.74
Gro-All Super Fish 2-12-6 (3038; 4187; 3992; 2898; 2647)	1.79	1.65	13.65	12.50	12.64	12.00	1.01	0.50	6.24	6.00	6.24
Gro-All Super Fish 2-12-6 (3111)	1.54	1.65	14.24	12.50	13.72	12.00	0.52	0.50	*5.69	6.00	5.69
Gro-All Super Special 4-16-4 (4509)	3.25	3.29	14.76	16.50	*14.16	16.00	0.60	0.50	4.34	4.00	4.34
Gro-All Top Dresser 7-6-5 (3802)	*4.41	5.76	8.33	6.50	7.89	6.00	0.44	0.50	5.90	5.00	5.90
Gro-All Truck and Potato Special 5-8-5 (4039)	4.07	4.11	9.96	8.50	8.84	8.00	1.12	0.50	5.18	5.00	5.18
COOPERATIVE G. L. F. EXCHANGE, INC., Rochester, N. Y.											
G. L. F. 2-8-10 (4050; 3871)	1.75	1.64	9.49	8.50	8.58	8.00	0.91	0.50	10.23	10.00	10.23
G. L. F. 2-8-10 (3773)	1.87	1.64	9.96	8.50	9.38	8.00	0.58	0.50	*9.58	10.00	9.58
G. L. F. 3-12-6 (3190)	2.63	2.46	13.20	12.50	12.20	12.00	1.00	0.50	6.10	6.00	6.10
G. L. F. 4-8-7 (3389; 4055; 3191)	3.36	3.28	9.14	8.50	8.54	8.00	0.60	0.50	7.19	7.00	7.19
G. L. F. 4-12-4 (3454; 3385; 3192)	3.22	3.28	13.66	12.50	12.70	12.00	0.96	0.50	4.18	4.00	4.18
G. L. F. 5-8-7 (3867; 3782)	4.01	4.11	9.26	8.50	8.51	8.00	0.75	0.50	7.25	7.00	7.25
G. L. F. 5-10-5 (3869; 3387; 3772)	4.11	4.11	11.88	10.50	10.63	10.00	1.25	0.50	5.06	5.00	5.06
G. L. F. 10-16-10 (3615)	*7.62	8.22	17.05	16.50	16.07	16.00	0.98	0.50	9.97	10.00	9.97
G. L. F. 10-20-10 (3388)	*7.38	8.22	20.46	20.50	19.81	20.00	0.65	0.50	10.34	10.00	10.34
G. L. F. 10-30-10 (3781)	8.23	8.22	29.04	30.50	*27.66	30.00	1.38	0.50	*7.49	10.00	7.49
G. L. F. Approved Fertilizers 6-9-6 (4051; 3783)	4.99	4.94	12.45	9.50	10.20	9.00	2.25	0.50	6.43	6.00	6.43
G. L. F. Fertilizer 2-12-4 (3531)	*1.22	1.64	14.21	12.50	12.99	12.00	1.22	0.50	4.07	4.00	4.07
G. L. F. Fertilizer 2-12-4 (3453)	1.79	1.64	13.15	12.50	12.55	12.00	0.60	0.50	4.56	4.00	4.56
G. L. F. Fertilizer 2-12-4 (3875)	2.09	1.64	13.20	12.50	*11.80	12.00	1.40	0.50	4.92	4.00	4.92
G. L. F. Vegetable Special 5-10-5 (3868; 4054)	4.23	4.11	12.03	10.50	10.83	10.00	1.20	0.50	5.17	5.00	5.17

*Deficient

TABLE III. ANALYSES OF SAMPLES OF COMPLETE FERTILIZERS — FURNISHING NITROGEN, PHOSPHORIC ACID AND POTASH

MANUFACTURER AND BRAND NAME	NITROGEN		PHOSPHORIC ACID						POTASH		
	Found	Guar.	Total		Available		Insoluble		Found	Guar.	As Muriate
			Found	Guar.	Found	Guar.	Found	Guar.			
	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.
AMOS EBY & CO., Leaman Place, Pa.											
Eby Pequea Ammoniated (2570)	1.05	0.82	12.26	12.00	11.74	10.00	0.52	2.00	3.90	3.00	3.90
Eby Pequea Economy (2569)	1.65	1.64	11.16	11.00	10.60	9.00	0.56	2.00	3.44	3.00	3.44
Eby Pequea General Crop (2571)	2.63	2.46	14.12	13.00	13.66	12.00	0.46	1.00	5.43	5.00	5.43
Eby Pequea Grase Special (2573)	6.77	6.58	7.17	7.00	7.03	6.00	0.14	1.00	6.09	5.00	6.09
Eby Pequea High Grade (2572)	3.33	3.29	8.20	8.00	7.88	6.00	0.32	2.00	6.01	5.00	6.01
Eby Pequea Special Potato (2567)	2.54	2.46	9.80	10.00	9.24	8.00	0.56	2.00	7.43	7.00	7.43
Eby Pequea Valley Fertilizer (2574)	1.93	1.64	9.39	10.00	9.09	8.00	0.30	2.00	10.47	10.00	10.47
ERIE REDUCTION CO., Erie, Pa.											
Erie Potato and Truck Special (3717)	1.82	1.65	9.45	8.50	8.71	8.00	0.74	0.50	9.85	10.00	9.85
Erie Truck Special (3718)	3.10	3.29	9.63	8.50	8.59	8.00	1.04	0.50	7.81	7.00	7.81
General Crop Special (3714)	1.76	1.65	14.15	12.50	13.25	12.00	0.90	0.50	2.66	2.00	2.66
FARMERS FERTILIZER & FEED CO., Westminster, Md.											
Potato Grower Fertilizer (2603; 4435)	1.86	1.64	9.02	9.00	8.60	8.00	0.42	1.00	5.27	5.00	5.27
XXX Fertilizer (2602)	1.02	0.82	10.65	10.00	10.53	9.00	0.12	1.00	4.00	4.00	4.00
FARMERS FERTILIZER WORKS, Elizabethtown, Pa.											
Farmers' 3-5-12 With Sulphate of Potash (4122)	2.58	2.46	6.61	5.00	6.25	5.00	0.36	----	12.62	12.00	----
Farmers' 3-12-5 (4140)	2.63	2.46	13.45	12.00	12.56	12.00	0.90	----	5.20	5.00	5.20
Farmers' Best Yet (2454; 4138)	1.73	1.64	9.34	8.50	9.00	8.00	0.34	0.50	10.21	10.00	10.21
Farmers' Gilt Edge Potato and Truck (2459; 4135)	3.40	3.28	10.23	8.50	9.58	8.00	0.65	0.50	7.34	7.00	7.34
Farmers' Golden Sheaf (2462; 4144)	1.77	1.64	9.02	8.50	8.60	8.00	0.42	0.50	5.36	5.00	5.36
Farmers' IXL (3847; 2455; 4141)	1.82	1.64	13.38	12.00	12.77	12.00	0.61	----	4.21	4.00	4.21
Farmers' Tobacco Special (2453)	4.45	4.10	6.30	5.00	5.74	4.00	0.56	1.00	6.54	5.00	----
Grain and Grase Special (2460; 4143)	0.97	0.82	10.36	9.50	9.86	9.00	0.50	0.50	4.56	4.00	4.56
Pride of Donegal (4644; 2461; 4139)	1.79	1.64	10.31	9.50	10.03	9.00	0.28	0.50	3.55	3.00	3.55
JOSEPH R. GAWTHROP, Kennett Square, Pa.											
Champion Fertilizer for Wheat and Graee (3661; 4811)	1.89	1.65	11.85	9.00	9.97	9.00	1.88	----	3.66	3.00	3.66
Special Ammoniated Phosphate for Corn, Oate and Wheat (3660)	1.52	1.23	12.28	10.00	11.34	10.00	0.94	----	3.09	2.50	3.09
Special Ammoniated Phoephate for Corn, Oats and Wheat (4810)	1.28	1.23	10.55	10.00	*9.71	10.00	0.84	----	2.64	2.50	2.64
Special Potato and Truck Phoephate (3658)	1.37	1.03	9.75	7.75	9.07	7.75	0.58	----	7.00	5.00	7.00
Sure Crop Phosphate (3659)	1.63	0.82	14.22	12.00	13.20	12.00	1.02	----	2.03	1.00	2.03
GIPE FERTILIZER WORKS, Lebanon, Pa.											
Gipe's 2-8-5 (4211; 3539; 4404)	1.68	1.65	9.81	9.00	8.87	8.00	0.94	1.00	5.62	5.00	5.62
Gipe's 2-8-10 (4402)	1.74	1.65	9.34	9.00	8.94	8.00	0.40	1.00	10.16	10.00	10.16
Gipe'e 2-8-10 (3536)	1.96	1.65	11.39	9.00	10.23	8.00	1.16	1.00	*8.53	10.00	8.53
Gipe's 2-12-6 (4403)	1.74	1.65	13.39	13.00	12.11	12.00	1.28	1.00	6.03	6.00	6.03
Gipe's 4-8-7 (4212)	3.62	3.29	9.53	9.00	8.53	8.00	1.00	1.00	6.81	7.00	6.81
Gipe's 4-8-7 (4401)	3.15	3.29	10.24	9.00	9.68	8.00	0.56	1.00	*6.20	7.00	6.20
GRIFFITH & BOYD COMPANY, Baltimore, Md.											
Extra Strength Guano (3151; 2653; 3379)	3.67	3.29	16.55	16.50	16.27	16.00	0.28	0.50	4.64	4.00	4.64
Farmers' Potato Manure (3008; 3145)	0.96	0.82	8.81	8.50	8.38	8.00	0.43	0.50	6.22	6.00	6.22
Farmers' Potato Manure (4458)	0.86	0.82	8.19	8.50	*7.79	8.00	0.40	0.50	5.96	6.00	5.96
Farmers' Potato Manurs (2769)	0.96	0.82	9.13	8.50	8.95	8.00	0.18	0.50	*5.80	6.00	5.80
Fish and Potash Guano (3009; 3141; 4262; 2767; 2557; 4626; 3859)	1.56	1.44	11.28	10.50	10.63	10.00	0.65	0.50	3.10	3.00	3.10
Fish and Potash Guano (4209)	1.49	1.44	11.68	10.50	10.16	10.00	1.52	0.50	*2.68	3.00	2.68
Fish, Blood and Potash (4739; 4459; 3328; 4793; 3018; 4555; 3245; 2768)	1.56	1.44	11.39	10.75	10.81	10.25	0.58	0.50	2.10	2.00	2.10
General Crop Growsr (3987; 4757; 3425)	1.84	1.65	10.03	9.50	9.55	9.00	0.48	0.50	3.12	3 00	3.12
General Crop Grower (4482)	1.82	1.65	9.59	9.50	*8.11	9.00	1.48	0.50	3.15	3.00	3.15
Gilt Edge Crop Guano (4263)	1.52	1.65	9.34	8.50	8.98	8.00	0.36	0.50	*9.44	10.00	9.44
Gilt Edge Crop Guano (2893)	1.67	1.55	9.53	8.50	8.49	8.00	1.04	0.50	*9.69	10.00	9.69
Gilt Edge Crop Guano (3950)	1.65	1.65	9.58	8.50	8.76	8.00	0.82	0.50	9.95	10.00	9.95

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MANUFACTURER AND BRAND NAME	NITROGEN		PHOSPHORIC ACID						POTASH		
			Total		Available		Insoluble				
	Found	Guar.	Found	Guar.	Found	Guar.	Found	Guar.	Found	Guar.	As Muriate
	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.
Gilt Edge Crop Guano (2770)	1.59	1.65	9.31	8.50	8.71	8.00	0.60	0.50	*9.64	10.00	9.64
Gilt Edge Crop Guano (3809)	1.65	1.85	9.41	8.50	8.61	8.00	0.80	0.50	*9.75	10.00	9.75
Grower's Favorite (4460; 3330; 4794; 3377)	3.50	3.29	8.84	8.50	8.39	8.00	0.45	0.50	4.27	4.00	4.27
Grower's Favorite (4738)	*3.01	3.29	8.70	8.50	8.54	8.00	0.16	0.50	4.04	4.00	4.04
High Grade Economizer (3016; 4554: 4625; 2655; 3666)	1.75	1.65	13.17	12.50	12.38	12.00	0.79	0.50	5.06	5.00	5.06
High Grade Fish and Potash Mixture (2885)	1.78	1.65	13.51	12.50	12.79	12.00	0.72	0.50	*7.57	8.00	7.57
High Grade Fish and Potash Mixture (2891)	1.73	1.65	13.70	12.50	12.72	12.00	0.98	0.50	*7.53	8.00	7.53
High Grade Fish and Potash Mixture (3331)	1.65	1.65	13.85	12.50	12.17	12.00	1.68	0.50	*7.53	8.00	7.53
High Grade Truck Guano (3147; 3989; 3244)	4.34	4.11	8.78	8.50	8.32	8.00	0.46	0.50	7.39	7.00	7.39
I-Gro (3566)	4.39	3.70	11.58	10.50	10.84	10.00	0.74	0.50	4.82	4.00	----
Nitro Crop Feeder (3329; 3951)	6.59	6.58	5.03	4.50	4.53	4.00	0.50	0.50	2.27	2.00	2.27
Nitro Crop Feeder (2894)	*6.30	6.58	5.31	4.50	4.89	4.00	0.42	0.50	2.88	2.00	2.88
Peerless Fertilizer (2883; 4740; 4624)	1.05	0.82	10.85	10.50	10.30	10.00	0.55	0.50	3.00	3.00	3.00
Peerless Fertilizer (3193)	2.29	0.82	10.03	10.50	*9.55	10.00	0.46	0.50	2.89	3.00	2.89
Royal Potash Guano (4260; 2727; 4072; 3194; 2652; 3860; 3808)	1.06	0.82	10.26	9.50	9.76	9.00	0.50	0.50	4.12	4.00	4.12
Special Formula (3569; 3616)	1.69	1.65	11.19	10.50	10.10	10.00	1.09	0.50	4.05	4.00	4.05
Special Guano (3006; 2892; 4090; 2556; 2654; 3665)	1.79	1.65	9.28	8.50	8.87	8.00	0.41	0.50	5.17	5.00	5.17
Special Potato Guano (3007; 3146; 4091; 3568; 3246; 3861)	3.51	3.29	9.02	8.50	8.45	8.00	0.57	0.50	6.38	6.00	6.38
Special Potato Guano (2555)	*2.83	3.29	10.12	8.50	9.92	8.00	0.20	0.50	5.82	6.00	5.82
THE HUBBARD FERTILIZER CO., Baltimore, Md.											
Hubbard's 1-9-4 Fertilizer (4254; 3995; 4672; 3142)	0.91	0.82	10.00	9.50	9.39	9.00	0.61	0.50	4.20	4.00	4.20
Hubbard's 1-9-4 Fertilizer (3071)	1.60	0.82	9.58	9.50	*8.20	9.00	1.36	0.50	4.58	4.00	4.58
Hubbard's 2-12-4 Fertilizer (3831; 4273; 3143)	1.73	1.65	12.94	12.50	12.16	12.00	0.78	0.50	4.21	4.00	4.21
Hubbard's 2-12-4 Fertilizer (3996)	1.86	1.85	12.68	12.50	*11.52	12.00	1.16	0.50	3.84	4.00	3.84
Hubbard's 2-12-4 Fertilizer (4702)	1.82	1.65	12.88	12.50	*11.76	12.00	1.12	0.50	4.06	4.00	4.08
Hubbard's 2-12-6 Fertilizer (2836; 3286)	1.74	1.65	13.39	12.50	12.84	12.00	0.55	0.50	6.13	6.00	6.13
Hubbard's 2-12-6 Fertilizer (4727)	1.90	1.65	11.96	12.50	*11.58	12.00	0.40	0.50	5.83	6.00	5.83
Hubbard's Complete Fertilizer 2-12-2 (4350; 2835)	1.81	1.65	13.57	12.50	12.94	12.00	0.63	0.50	2.43	2.00	2.43
Hubbard's Complete Fertilizer 2-12-2 (4469)	1.76	1.65	12.72	12.50	*11.64	12.00	1.08	0.50	2.29	2.00	2.29
Hubbard's Farmers IXL 2-9-3 (4701)	1.78	1.65	10.13	9.50	9.17	9.00	0.96	0.50	4.40	3.00	4.40
Hubbard's Jersey Trucker 2-8-10 (3674; 2680; 4199; 3068; 4336; 4728)	1.76	1.65	9.29	8.50	8.57	8.00	0.72	0.50	10.20	10.00	10.20
Hubbard's Money Maker Fertilizer 2-8-5 (4256; 2679; 3069; 4673; 4729)	1.79	1.65	8.86	8.50	8.17	8.00	0.69	0.50	5.15	5.00	5.15
Hubbard's Money Maker Fertilizer 2-8-5 (2837)	1.81	1.65	9.43	8.50	9.01	8.00	0.42	0.50	*4.72	5.00	4.72
Hubbard's Money Maker Fertilizer 2-8-5 (4131)	1.84	1.65	9.63	8.50	8.77	8.00	0.86	0.50	*4.65	5.00	4.65
Hubbard's Potato Fertilizer 4-8-7 (3830; 2678; 3067; 3340; 3250)	3.38	3.29	9.42	8.50	8.68	8.00	0.74	0.50	7.32	7.00	7.32
Hubbard's Potato Fertilizer 4-8-7 (4133)	3.41	3.29	9.85	8.50	8.55	8.00	1.30	0.50	*6.61	7.00	6.61
INDEPENDENT MANUFACTURING CO., Philadelphia, Pa.											
Independent's Consumer 2-8-5 Fertilizer (3229; 4117)	1.98	1.64	9.20	8.00	8.76	8.00	0.44	----	5.39	5.00	5.39
Independent's Special Wheat Fertilizer 2-12-5 (2814)	2.13	1.64	16.15	12.00	14.99	12.00	1.16	----	5.29	5.00	5.29
Independent's Standard 3-8-10 Fertilizer (2813)	2.86	2.46	11.85	8.00	10.25	8.00	1.60	----	10.82	10.00	10.82
Independent's Standard 4-8-5 Fertilizer (3228)	3.50	3.29	10.86	8.00	9.56	8.00	1.30	----	5.97	5.00	5.97
Independent's Standard 5-8-5 Fertilizer (4119; 2816)	4.57	4.11	10.00	8.00	9.28	8.00	0.72	----	5.44	5.00	5.44
Independent's Standard 8-8-8 Fertilizer (2817)	6.61	6.58	8.70	8.00	8.56	8.00	0.14	----	8.24	8.00	8.24
Independent's Standard 10-6-2 Fertilizer (2819)	8.30	8.20	8.53	6.00	8.17	6.00	0.36	----	3.47	2.00	3.47
Independent's Standard Matchless Market Gardner 5-8-7 (4118; 2812)	4.46	4.11	10.14	8.00	9.38	8.00	0.76	----	6.95	7.00	6.95
Independent's Standard Wonder Worker 7-6-5 (2810)	5.79	5.76	8.57	6.00	8.45	6.00	0.12	----	5.96	5.00	5.96
INTERNATIONAL AGRICULTURAL CORPORATION, Buffalo, N. Y.											
International Crop Grower 2-12-2 (3697)	1.82	1.85	14.21	12.50	13.43	12.00	0.78	0.50	2.29	2.00	2.29
International Early Harvest 3-10-6 (3695)	2.53	2.47	11.33	10.50	10.05	10.00	1.28	0.50	6.10	6.00	6.10
International Garden Truck 4-8-7 (4084; 3698; 3750)	3.40	3.30	9.50	8.50	8.67	8.00	0.83	0.50	7.41	7.00	7.41
International Ideal 2-8-5 (4086; 3751)	1.68	1.65	9.66	8.50	8.32	8.00	1.34	0.50	5.46	5.00	5.46
International Superior 4-12-4 (3699)	3.42	3.30	13.66	12.50	12.62	12.00	1.04	0.50	4.45	4.00	4.45
International Supreme 2-8-10 (4085)	1.66	1.65	10.22	8.50	9.24	8.00	0.98	0.50	*9.62	10.00	9.62
International Supreme 2-8-10 (3696)	1.69	1.65	9.48	8.50	8.48	8.00	1.00	0.50	9.97	10.00	9.97

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MANUFACTURER AND BRAND NAME	NITROGEN		PHOSPHORIC ACID						POTASH		
			Total		Available		Insoluble				
	Found	Guar.	Found	Guar.	Found	Guar.	Found	Guar.	Found	Guar.	As Muriate
	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.
International Tip Top 1-9-4 (3749)	1.05	0.82	10.93	9.50	8.99	9.00	1.94	0.50	4.28	4.00	4.28
THE JARECKI CHEMICAL CO., Sandusky, Ohio											
Jarecki's 1-9-4 Fertilizer (3174)	0.90	0.82	9.91	9.50	9.39	9.00	0.52	0.50	4.43	4.00	4.43
Jarecki's 2-8-10 Fertilizer (3173)	1.49	1.65	9.21	8.50	8.55	8.00	0.66	0.50	10.10	10.00	10.10
Jarecki's Potato Grower (3175)	3.17	3.29	9.06	8.50	8.74	8.00	0.32	0.50	7.49	7.00	7.49
KEYSTONE BONE FERTILIZER CO., Philadelphia, Pa.											
Corn and Potato Manure (2912)	1.80	1.64	11.08	9.00	10.04	8.00	1.04	1.00	5.37	5.00	5.37
Early Potato Manure (3201)	3.72	3.28	9.43	9.00	8.93	8.00	0.50	1.00	7.47	7.00	7.47
Truck and Corn Manure (2913; 4405; 3200)	2.01	1.64	9.90	9.00	9.37	8.00	0.53	1.00	10.46	10.00	10.46
Twentieth Century Special (2914)	2.10	1.64	12.63	11.00	11.71	10.00	0.92	1.00	6.16	6.00	6.16
KEYSTONE GRANGE EXCHANGE, INC., Harrisburg, Pa.											
Granger's Choice (3105)	2.04	1.65	14.30	12.50	12.28	12.00	2.02	0.50	2.29	2.00	2.29
Granger's Climax (4183; 3574; 2755)	1.75	1.65	9.23	8.50	8.57	8.00	0.66	0.50	10.53	10.00	10.53
Granger's Pep (4182; 3582; 4073; 4094)	2.53	2.47	13.55	12.50	12.46	12.00	1.09	0.50	3.49	3.00	3.49
Granger's Potato (3573; 3106; 2753)	3.30	3.29	9.63	8.50	8.95	8.00	0.68	0.50	7.07	7.00	7.07
Granger's Prize (4184)	1.75	1.65	9.11	8.50	8.49	8.00	0.62	0.50	*4.67	5.00	4.67
Granger's Prize (3583)	1.77	1.65	9.31	8.50	8.53	8.00	0.78	0.50	4.95	5.00	4.95
Granger's Tip Top (4075)	3.32	3.29	18.30	16.50	17.02	16.00	1.28	0.50	10.72	10.00	10.72
Granger's Tip Top (2754)	3.30	3.29	17.25	16.50	16.81	16.00	0.44	0.50	*9.79	10.00	9.79
KOLLER FERTILIZER CO., Glen Rock, Pa.											
Koller's Ammoniated Phosphate (2589; 4429)	0.89	0.82	10.09	8.50	9.52	8.00	0.57	0.50	5.53	5.00	5.53
Koller's Corn Special Phosphate (3647; 2590)	1.87	1.65	12.48	11.00	11.35	10.00	1.13	1.00	4.96	4.00	4.96
Koller's Improved Potato Phosphate (2593)	4.19	4.12	12.32	11.00	11.92	10.00	0.40	1.00	10.26	10.00	10.26
Koller's Keystone Potato Fertilizer (3649; 2591)	3.24	3.30	10.93	8.50	10.16	8.00	0.77	0.50	7.94	7.00	7.94
Koller's Lion Brand Phosphate (3648; 4809; 2595; 4428)	1.77	1.65	11.84	11.00	10.75	10.00	1.09	1.00	6.44	6.00	6.44
Koller's Potato Grower Phosphate (2588; 4430)	0.86	0.82	9.86	8.50	9.32	8.00	0.54	0.50	8.29	8.00	8.29
Koller's Producer Phosphate (2587; 4431)	1.68	1.65	9.87	9.00	8.98	8.00	0.89	1.00	10.23	10.00	10.23
Koller's Super-Ammoniated Phosphate (2592; 4427)	1.70	1.65	9.80	9.00	9.18	8.00	0.62	1.00	5.35	5.00	5.35
Koller's Super-Ammoniated Phosphate (3646)	*1.35	1.65	11.29	9.00	10.23	8.00	1.06	1.00	9.38	5.00	9.38
LANCASTER BONE FERTILIZER CO., INC., Lancaster, Pa.											
Conestoga Brand 2-8-10 (3673; 4816)	1.68	1.65	8.68	8.00	8.15	8.00	0.53	----	10.20	10.00	10.20
Conestoga Brand 3-12-5 (4242; 2640)	2.47	2.47	12.89	12.00	12.36	12.00	0.53	----	5.17	5.00	5.17
Conestoga Brand 3-12-5 (3672)	2.76	2.47	12.17	12.00	*11.73	12.00	0.44	----	5.37	5.00	5.37
Conestoga Brand Farmers Favorite (4172; 3230)	0.92	0.82	9.82	9.00	9.43	9.00	0.39	----	4.22	4.00	4.22
Conestoga Brand Fish Compound (4009)	1.52	1.65	11.37	10.00	10.27	10.00	1.10	----	3.16	3.00	3.16
Conestoga Brand Harvest Queen (2442; 4244; 3671; 4814)	1.78	1.65	9.07	8.00	8.67	8.00	0.40	----	5.03	5.00	5.03
Conestoga Brand Harvest Queen (4171)	1.68	1.65	9.18	8.00	8.68	8.00	0.50	----	*4.58	5.00	4.58
Conestoga Brand Lancaster Peerless (2443; 4245; 3670; 2637)	1.70	1.65	13.01	12.00	12.62	12.00	0.39	----	4.05	4.00	4.05
Conestoga Brand Truckers Special (2444; 2639)	3.23	3.29	8.95	8.00	8.64	8.00	0.31	----	7.16	7.00	7.16
LANCASTER CHEMICAL CO., Lancaster, Pa.											
No. 5 Flag Brand (2450)	1.66	1.64	9.35	9.00	9.23	8.00	0.12	1.00	7.72	5.00	7.72
No. 19 Potato Special (2449)	1.47	1.64	8.87	9.00	8.75	8.00	0.12	1.00	10.35	10.00	10.35
LEBANON FERTILIZER WORKS, Lebanon, Pa.											
Levan's 1-9-4(2608)	0.91	0.82	9.90	10.00	9.60	9.00	0.30	1.00	4.45	4.00	4.45
Levan's 2-8-5 (2612; 4176)	1.66	1.65	9.13	9.00	8.55	8.00	0.58	1.00	5.19	5.00	5.19
Levan's 2-8-10 (2610; 4173)	1.70	1.65	8.99	9.00	8.59	8.00	0.40	1.00	10.11	10.00	10.11
Levan's 2-9-3 (4178)	1.65	1.65	9.68	10.00	9.04	9.00	0.64	1.00	3.10	3.00	3.10
Levan's 2-12-6 (2606)	1.75	1.65	13.33	13.00	12.93	12.00	0.40	1.00	6.04	6.00	6.04
Levan's 3-12-5 (2607; 4181)	2.47	2.47	13.43	13.00	12.72	12.00	0.71	1.00	5.12	5.00	5.12
Levan's 4-8-7 (2611)	*3.09	3.29	9.48	9.00	9.20	8.00	0.28	1.00	*6.60	7.00	6.60

*Deficient

TABLE III. ANALYSES OF SAMPLES OF COMPLETE FERTILIZERS — FURNISHING NITROGEN, PHOSPHORIC ACID AND POTASH

MANUFACTURER AND BRAND NAME	NITROGEN		PHOSPHORIC ACID						POTASH		
			Total		Available		Insoluble				
	Found	Guar.	Found	Guar.	Found	Guar.	Found	Guar.	Found	Guar.	As Muriate
	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.
Levan's 4-8-7 (3537)	3.43	3.29	9.30	9.00	8.56	8.00	0.74	1.00	6.85	7.00	6.85
Levan's 4-16-10 (2615; 4177)	3.35	3.29	16.78	17.00	16.14	16.00	0.64	1.00	10.01	10.00	10.01
FRED E. LORD, Espy, Pa.											
Columbia County Garden Special (2997)	4.57	4.11	12.72	10.50	10.94	10.00	1.78	0.50	5.82	5.00	5.82
Columbia County General Crop (3001)	4.14	3.29	11.52	8.50	10.36	8.00	1.16	0.50	7.84	7.00	7.84
Columbia County Potato Special (3000; 3395; 4556)	1.94	1.64	10.07	8.50	9.12	8.00	0.95	0.50	10.73	10.00	10.73
Columbia County Spring Special (3002; 4559)	2.00	1.64	11.49	10.50	10.78	10.00	0.71	0.50	4.76	4.00	4.76
FREDERICK MEHRING FERTILIZER WORKS, Keymar, Md.											
Mehring Big "4" 1-9-4 (2598; 4433)	0.90	0.82	10.11	10.00	9.58	9.00	0.53	1.00	4.91	4.00	4.91
Mehring's Mammoth Truck Grower 2-8-5 (4434)	1.55	1.64	9.12	9.00	8.36	8.00	0.76	1.00	6.15	5.00	6.15
THE MILLER FERTILIZER CO., Baltimore, Md.											
Miller's 2-8-5 (4772; 4305; 4229; 2942; 4721; 2497; 3640; 4389; 3271)	1.73	1.65	9.09	8.50	8.27	8.00	0.82	0.50	5.21	5.00	5.21
Miller's 2-12-4 (4307; 3472; 4395; 3716; 4275)	1.78	1.65	13.04	12.50	12.32	12.00	0.72	0.50	4.19	4.00	4.19
Miller's 2-12-6 (3853; 4304)	1.76	1.65	13.05	12.50	12.23	12.00	0.82	0.50	6.49	6.00	6.49
Miller's 2-16-8 (3130)	2.30	1.65	13.18	16.50	*12.91	16.00	0.27	0.50	8.71	8.00	8.71
Miller's 4-8-7 (3510; 3206; 2500; 4399)	3.32	3.29	8.88	8.50	8.34	8.00	0.54	0.50	7.29	7.00	7.29
Miller's 4-8-7 (3833)	3.23	3.29	9.31	8.50	8.57	8.00	0.74	0.50	*6.62	7.00	6.62
Miller's 4-12-4 (3459; 2501; 4063)	3.27	3.29	13.02	12.50	12.35	12.00	0.67	0.50	4.21	4.00	4.21
Miller's 4-12-4 (4400)	3.21	3.29	11.99	12.50	*11.51	12.00	0.48	0.50	4.23	4.00	4.23
Miller's 4-16-4 (3780; 4233)	3.42	3.29	16.94	16.50	16.43	16.00	0.51	0.50	4.51	4.00	4.51
Miller's 4-16-4 (4062)	3.38	3.29	17.04	16.50	*15.80	16.00	1.24	0.50	4.10	4.00	4.10
Miller's 5-8-7 (3715)	4.32	4.11	9.59	8.50	8.59	8.00	1.00	0.50	7.38	7.00	7.38
Miller's Early Trucker 5-8-5 (4128)	4.31	4.11	9.44	8.50	8.96	8.00	0.48	0.50	5.94	5.00	5.94
Miller's Early Trucker 5-8-5 (3133)	*3.88	4.11	9.67	8.50	9.09	8.00	0.58	0.50	5.66	5.00	5.66
Miller's Farmers Profit 2-10-4 (4720)	1.80	1.65	10.57	10.50	10.05	10.00	0.52	0.50	4.95	4.00	4.95
Miller's Grass and Grain 2-9-3 (3851)	1.74	1.65	10.80	9.50	9.80	9.00	1.00	0.50	3.39	3.00	3.39
Miller's Harvest Queen 1-9-4 (4306; 4719; 3327; 3632; 2498; 4398; 3131; 4391; 4613)	0.94	0.82	9.68	9.50	9.20	9.00	0.48	0.50	4.28	4.00	4.28
Miller's No. 1 Potato and Vegetable Grower 4-8-4 (3779; 3471; 3638)	3.30	3.29	9.75	8.50	8.86	8.00	0.89	0.50	4.58	4.00	4.58
Miller's Pimlico 2-8-10 (3508; 3205; 3326; 2499; 4397; 3132; 4270; 4646)	1.71	1.65	9.05	8.50	8.41	8.00	0.64	0.50	10.31	10.00	10.31
Miller's Pimlico 2-8-10 (3637)	1.89	1.65	9.64	8.50	8.52	8.00	1.12	0.50	*9.38	10.00	9.38
Miller's Wheat and Grass Grower 2-12-2 (4232)	1.73	1.65	13.46	12.50	12.66	12.00	0.80	0.50	2.25	2.00	2.25
MORTON FERTILIZER CO., Baltimore, Md.											
Morton's 2-12-4 (4670)	1.69	1.64	12.72	13.00	12.28	12.00	0.44	1.00	*3.33	4.00	3.33
Morton's 2-12-6 (4617)	1.71	1.64	12.69	13.00	12.21	12.00	0.48	1.00	6.41	6.00	6.41
Morton's Farmers Favorite (4668; 2657)	1.78	1.64	8.71	9.00	8.10	8.00	0.61	1.00	5.23	5.00	5.23
Morton's Farmers Favorite (4422)	1.69	1.64	8.42	9.00	*7.38	8.00	1.04	1.00	5.31	5.00	5.31
Morton's Farmers Favorite (4424)	1.68	1.64	8.56	9.00	*7.44	8.00	1.12	1.00	4.93	5.00	4.93
Morton's Gilt Edge Guano (2656; 4426)	3.21	3.28	8.77	9.00	8.46	8.00	0.31	1.00	6.02	6.00	6.02
Morton's Harvest Queen (4669)	0.93	0.82	9.07	10.00	*8.31	9.00	0.76	1.00	4.51	4.00	4.51
Morton's 10% Potash Fertilizer (2658; 4420; 4423)	1.61	1.64	8.74	9.00	8.20	8.00	0.54	1.00	10.19	10.00	10.19
MYERSTOWN FERTILIZER WORKS, Myerstown, Pa.											
Corn and Potato Grower 4-8-5 (2618)	*2.53	3.29	11.05	9.00	10.77	8.00	0.28	1.00	5.95	5.00	5.95
Farmer's Special 3-8-3 (2620)	*2.07	2.47	11.70	9.00	11.46	8.00	0.24	1.00	4.06	3.00	4.06
Grain and Grass Grower 4-8-10 (2619)	*2.55	3.29	11.28	9.00	11.08	8.00	0.20	1.00	*9.30	10.00	9.30
G. OBER & SONS CO., Baltimore, Md.											
Blue Ribbon Tobacco Fertilizer (2561)	2.43	2.47	6.33	6.00	5.87	5.00	0.46	1.00	14.69	12.00	----
Ober's Red Seal Corn and Wheat Guano (4481; 2846; 2560; 4503)	1.83	1.65	14.24	13.00	12.82	12.00	1.42	1.00	4.30	4.00	4.30
Ober's Red Seal Tobacco Fertilizer (2563)	3.37	3.29	9.22	9.00	8.42	8.00	0.80	1.00	6.28	5.00	----
Ober's Special Plant Food (4479; 2605; 2564; 4247; 4500; 4393; 2596)	1.71	1.65	9.70	9.00	8.71	8.00	0.99	1.00	5.02	5.00	5.02
Ober's Special Plant Food (4439)	1.70	1.65	9.08	9.00	8.12	8.00	0.96	1.00	*4.71	5.00	4.71

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MANUFACTURER AND BRAND NAME	NITROGEN		PHOSPHORIC ACID						POTASH		
			Total		Available		Insoluble				
	Found	Guar.	Found	Guar.	Found	Guar.	Found	Guar.	Found	Guar.	As Muriate
	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.
Ober's Special Plant Food (3628)	1.55	1.65	10.32	9.00	8.80	8.00	1.52	1.00	*4.48	5.00	4.48
Ober's Special Tobacco Mixture (2559)	1.68	1.65	9.53	9.00	8.81	8.00	0.72	1.00	11.28	10.00	----
Ober's Stag Guano (4480; 3916)	0.89	0.82	10.55	10.00	9.23	9.00	1.32	1.00	4.13	4.00	4.13
Ober's Stag Guano (3629)	0.88	0.82	10.12	10.00	*8.74	9.00	1.38	1.00	*3.45	4.00	3.45
Ober's Stag Guano (4501)	0.92	0.82	9.94	10.00	9.02	9.00	0.92	1.00	*3.78	4.00	3.78
Ober's Standard Southern Vegetable Compound (4080)	5.66	5.76	6.03	7.00	*5.21	6.00	0.82	1.00	*4.70	5.00	4.70
Ober's Starkey Truck Compound (2452; 4392)	3.25	3.29	9.48	9.00	8.55	8.00	0.93	1.00	5.04	5.00	5.04
Ober's Sunbeam Guano (2844; 2451; 3312; 3918)	3.37	3.29	9.45	9.00	8.54	8.00	0.91	1.00	7.07	7.00	7.07
Ober's Super Wheat and Grain Grower (2604)	2.39	2.47	13.75	13.00	12.81	12.00	0.94	1.00	3.00	3.00	3.00
Ober's Superior Potato and Vegetable Grower (2843; 3917)	1.72	1.65	10.13	9.00	9.10	8.00	1.03	1.00	10.09	10.00	10.09
Ober's Superior Potato and Vegetable Grower (3315)	1.65	1.65	9.63	9.00	8.69	8.00	0.94	1.00	*9.16	10.00	9.16
Ober's Superior Potato and Vegetable Grower (4502)	1.62	1.65	10.01	9.00	8.85	8.00	1.16	1.00	*9.59	10.00	9.59
Ober's Swan E Guano (3487; 4246; 3776)	1.72	1.65	11.39	10.00	9.70	9.00	1.69	1.00	2.94	3.00	2.94
Ober's Swan E Guano (4079)	*1.43	1.65	8.67	10.00	*7.56	9.00	1.11	1.00	3.96	3.00	3.96
OLD GARDENER COMPANY, Pittsburgh, Pa.											
Old Gardener Special Greenhouse Mixture (3924)	3.12	3.00	14.57	13.00	12.91	12.00	1.66	1.00	4.28	4.00	4.28
OYLER & SPANGLER FERTILIZER WORKS, INC., Gettysburg, Pa.											
O & S Crop Grower (2490; 4169)	0.93	0.82	10.32	9.50	9.64	9.00	0.68	0.50	4.32	4.00	4.32
O & S Excelsior (2489)	1.73	1.65	8.87	8.50	8.03	8.00	0.84	0.50	5.41	5.00	5.41
O & S Excelsior (4168)	1.82	1.65	9.59	8.50	8.09	8.00	1.50	0.50	*4.52	5.00	4.52
O & S Potato Special (2491; 4167)	3.37	3.29	9.11	8.50	8.26	8.00	0.85	0.50	7.41	7.00	7.41
PATUXENT GUANO CO., Baltimore, Md.											
Beaver Brand Guano 1-9-4 (3099; 3442; 2508; 3720)	1.14	0.82	10.13	10.00	9.40	9.00	0.73	1.00	4.46	4.00	4.46
Beaver Brand Guano 1-9-4 (4695)	0.98	0.82	9.32	10.00	*8.68	9.00	0.64	1.00	4.42	4.00	4.42
Patuxent Big Yield 1-9-5 (2504)	0.90	0.82	9.57	10.00	9.29	9.00	0.28	1.00	5.45	5.00	5.45
Patuxent Champion Fertilizer 2-8-5 (3100; 2505; 4380; 2939; 4694)	1.58	1.65	8.75	9.00	8.30	8.00	0.45	1.00	5.48	5.00	5.48
Patuxent Farmers Friend 2-12-2 (3258)	1.72	1.65	13.53	13.00	11.93	12.00	1.60	1.00	2.85	2.00	2.85
Patuxent Plant Food 2-12-4 (4381)	1.98	1.65	13.27	13.00	12.11	12.00	1.16	1.00	4.64	4.00	4.64
Patuxent Potato and Truck Guano 4-8-4 (3257)	3.42	3.29	9.35	9.00	8.59	8.00	0.76	1.00	4.63	4.00	4.63
Patuxent Potato Grower 4-8-7 (2506; 3259)	3.36	3.29	8.60	9.00	8.25	8.00	0.35	1.00	7.36	7.00	7.36
Patuxent Potato Grower 4-8-7 (2940)	3.29	3.29	9.57	9.00	9.15	8.00	0.42	1.00	*6.61	7.00	6.61
Patuxent Tip Top Fertilizer 2-8-10 (2507; 4382)	1.86	1.65	8.55	9.00	8.19	8.00	0.36	1.00	10.51	10.00	10.51
PIEDMONT MT. AIRY GUANO CO., Baltimore, Md.											
Piedmont Farmers Favorite 1-9-4 (3475; 4317)	0.95	0.82	10.15	9.50	9.43	9.00	0.72	0.50	4.12	4.00	4.12
Piedmont Perfection Guano 2-8-5 (3477; 4315)	1.73	1.65	9.81	8.50	9.24	8.00	0.57	0.50	5.26	5.00	5.26
RASIN MONUMENTAL CO., Baltimore, Md.											
Rasin's Big Blaze Brand (3226)	2.48	2.47	12.22	11.00	11.18	10.00	1.04	1.00	6.12	6.00	6.12
Rasin's Comet Grain and Grass Grower (2985; 4547)	1.96	1.65	14.03	13.00	12.84	12.00	1.19	1.00	4.62	4.00	4.62
Rasin's Double Royal Brand (3489; 2982; 2820)	3.41	3.29	17.61	17.00	16.54	16.00	1.07	1.00	6.19	6.00	6.19
Rasin's Double Royal Brand (4333)	3.38	3.29	16.28	17.00	*15.52	16.00	0.76	1.00	5.82	6.00	5.82
Rasin's Early Crop Special (3079)	*3.88	4.11	10.03	9.00	8.89	8.00	1.14	1.00	*7.64	8.00	7.64
Rasin's High Analysis Grain Grower (3077)	3.47	3.29	14.07	13.00	12.25	12.00	1.82	1.00	4.43	4.00	4.43
Rasin's High Grade Truck Compound (3494; 2984; 3224)	3.47	3.29	10.15	9.00	8.95	8.00	1.20	1.00	7.51	7.00	7.51
Rasin's Hope Brand (3225)	1.82	1.65	14.04	13.00	12.90	12.00	1.14	1.00	4.85	4.00	4.85
Rasin's National Crop Compound (3492; 4330; 2717; 4570; 3055; 4489)	1.05	0.82	10.86	10.00	9.90	9.00	0.96	1.00	4.47	4.00	4.47
Rasin's Royal Fish and Potash Mixture (4331; 2981; 4551; 2823; 3080)	1.84	1.65	11.12	10.00	9.90	9.00	1.22	1.00	3.43	3.00	3.43
Rasin's Search Light Guano (4630; 4550)	1.94	1.65	14.09	13.00	13.27	12.00	0.82	1.00	6.16	6.00	6.16
Rasin's Universal Crop Manure (2718; 4569; 3053; 3227)	1.85	1.65	9.84	9.00	8.95	8.00	0.89	1.00	5.24	5.00	5.24
Rasin's Vegetable Special (3397; 2983; 4548)	1.87	1.65	9.59	9.00	8.83	8.00	0.76	1.00	10.71	10.00	10.71
Rasin's Vegetable Special (3081)	1.80	1.65	9.78	9.00	8.90	8.00	0.88	1.00	*9.62	10.00	9.62
Rasin's Wm. Penn Potato Grower (3493; 4332; 2822; 3082)	3.31	3.29	13.79	13.00	12.89	12.00	0.90	1.00	5.63	5.00	5.63

*Deficient

TABLE III. ANALYSES OF SAMPLES OF COMPLETE FERTILIZERS — FURNISHING NITROGEN, PHOSPHORIC ACID AND POTASH

MANUFACTURER AND BRAND NAME	NITROGEN		PHOSPHORIC ACID						POTASH		
	Found	Guar.	Total		Available		Insoluble		Found	Guar.	As Muriate
			Found	Guar.	Found	Guar.	Found	Guar.			
	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.
READING BONE FERTILIZER CO., Reading, Pa.											
Blood, Meat and Potash Mixture (2700; 3937; 4736)	1.85	1.64	9.39	9.00	8.94	8.00	0.45	1.00	3.94	4.00	3.94
Blood, Meat and Potash Mixture (4296)	1.64	1.64	9.18	9.00	8.42	8.00	0.76	1.00	*3.79	4.00	3.79
Blood, Meat and Potash Mixture (4666)	1.64	1.64	9.31	9.00	8.95	8.00	0.36	1.00	*3.80	4.00	3.80
Reading 1-8-5 (2703)	0.97	0.82	10.31	9.00	10.05	8.00	0.26	1.00	*4.77	5.00	4.77
Reading 1-8-5 (3796)	0.86	0.82	9.08	9.00	8.50	8.00	0.58	1.00	*4.78	5.00	4.78
Reading 2-8-10 (2702)	1.81	1.64	9.58	9.00	9.34	8.00	0.24	1.00	9.95	10.00	9.95
Reading 2-12-5 (4130; 3797)	1.73	1.64	13.76	13.00	12.73	12.00	1.03	1.00	5.27	5.00	5.27
Reading 2-12-5 (4102)	1.90	1.64	13.39	13.00	*11.79	12.00	1.60	1.00	5.14	5.00	5.14
Reading 3-8-5 (4114)	2.55	2.46	9.98	9.00	9.16	8.00	0.82	1.00	*4.43	5.00	4.43
Reading 4-8-6 (2701)	3.30	3.29	10.05	9.00	9.87	8.00	0.18	1.00	*5.39	6.00	5.39
Reading 4-8-6 (4295)	3.29	3.29	10.36	9.00	9.16	8.00	1.20	1.00	*4.98	6.00	4.98
Reading 4-8-6 (2514)	3.30	3.29	9.48	9.00	9.00	8.00	0.48	1.00	6.00	6.00	6.00
Reading 4-12-5 (4667; 4113; 3939)	3.24	3.29	13.45	13.00	12.74	12.00	0.71	1.00	4.98	5.00	4.98
Reading 5-8-5 (3938)	4.02	4.11	9.68	9.00	9.32	8.00	0.36	1.00	5.15	5.00	5.15
ROBERT A. REICHARD, INC., Allentown, Pa.											
Reichard's Animal Base 1-9-4 (4528)	0.88	0.82	9.49	10.00	9.25	9.00	0.24	1.00	4.12	4.00	4.12
Reichard's Animal Base 2-8-5 (3512; 4518; 4531; 4717)	1.72	1.64	8.80	9.00	8.41	8.00	0.39	1.00	5.09	5.00	5.09
Reichard's Animal Base 2-8-5 (4526)	1.66	1.64	8.47	9.00	*7.75	8.00	0.72	1.00	5.23	5.00	5.23
Reichard's Animal Base 2-8-10 (3511; 4525; 4718)	1.73	1.64	8.80	9.00	8.34	8.00	0.46	1.00	10.19	10.00	10.19
Reichard's Animal Base 2-8-10 (4529)	1.72	1.64	8.29	9.00	8.01	8.00	0.28	1.00	*9.69	10.00	9.69
Reichard's Animal Base 3-10-6 (3517; 4527; 3396; 4530)	2.56	2.46	10.78	11.00	10.31	10.00	0.47	1.00	6.09	6.00	6.09
Reichard's Animal Base 4-8-8 (3516; 3405)	3.35	3.28	9.08	9.00	8.63	8.00	0.45	1.00	8.28	8.00	8.28
Reichard's Famous 8-15-14 (3515; 3406)	6.66	6.58	17.21	17.00	16.73	16.00	0.48	1.00	14.81	14.00	14.81
F. S. ROYSTER GUANO CO., Baltimore, Md.											
Royster's 4-16-4 Fertilizer (2739; 3061; 3770; 4334)	3.52	3.29	18.26	16.50	17.40	16.00	0.86	0.50	4.26	4.00	4.26
Royster's 4-16-10 Fertilizer (3771; 2870; 3430)	3.30	3.29	18.18	16.50	17.35	16.00	0.83	0.50	10.35	10.00	10.35
Royster's 4-16-10 Fertilizer (3063)	3.42	3.29	16.31	16.50	15.97	16.00	0.34	0.50	*8.89	10.00	8.89
Royster's 10-16-14 Fertilizer (3688)	*7.42	8.22	17.16	16.50	16.06	16.00	1.10	0.50	15.57	14.00	15.57
Royster's Arrow 7% Potato Guano (2736)	5.74	5.76	8.02	6.50	7.90	6.00	0.12	0.50	5.25	5.00	5.25
Royster's Banner Guano 2-8-10 (3686; 3663; 4681; 3024; 2868)	1.72	1.65	9.71	8.50	9.09	8.00	0.62	0.50	10.10	10.00	10.10
Royster's Banner Guano 2-8-10 (4515)	1.66	1.55	9.59	8.50	9.39	8.00	0.20	0.50	*9.65	10.00	9.65
Royster's Bully Guano 2-8-5 (2708; 3023; 4453; 3429; 4097; 4656; 4343; 4818)	1.71	1.65	9.54	8.50	8.96	8.00	0.58	0.50	5.23	5.00	5.23
Royster's Curlew Guano 3-10-6 (3685; 3596; 3431; 3195)	2.53	2.47	11.69	10.50	10.71	10.00	0.98	0.50	6.28	6.00	6.28
Royster's Curlew Guano 3-10-6 (4778)	2.31	2.47	11.71	10.50	11.35	10.00	0.36	0.50	*5.43	6.00	5.43
Royster's Fish, Flesh and Fowl 2-9-3 (4280; 4227; 2709; 3060; 3892; 4777; 4741; 4700; 3025; 2869; 4098)	1.72	1.65	10.68	9.50	10.04	9.00	0.64	0.50	3.11	3.00	3.11
Royster's Gem Guano 2-12-4 (2738; 4226; 3022; 4575; 3935; 4096)	1.74	1.65	13.71	12.50	13.17	12.00	0.54	0.50	4.32	4.00	4.32
Royster's Jim Dandy Guano 2-12-2 (2735; 3667; 3316 ; 4345)	1.68	1.65	13.23	12.50	12.74	12.00	0.49	0.50	2.36	2.00	2.36
Royster's Prize Guano 4-8-10 (3982; 3994)	3.38	3.29	9.57	8.50	8.52	8.00	1.05	0.50	10.29	10.00	10.29
Royster's Prize Guano 4-8-10 (2786)	3.23	3.29	10.60	8.50	10.12	8.00	0.48	0.50	*9.62	10.00	9.62
Royster's Quality Trucker 4-8-7 (2788; 2740; 2710; 3064; 3815; 3669; 3020; 4344)	3.44	3.29	9.60	8.50	9.11	8.00	0.49	0.50	7.22	7.00	7.22
Royster's Rational Guano 1-9-4 (4288; 2711; 4716; 3983; 4341; 2931; 4574; 3840; 4514)	0.91	0.82	11.02	9.50	10.35	9.00	0.67	0.50	4.15	4.00	4.15
Royster's Trojan Guano 4-12-4 (3062; 3984)	3.43	3.29	13.79	12.50	12.92	12.00	0.87	0.50	4.22	4.00	4.22
Royster's Trojan Guano 4-12-4 (3428)	*3.00	3.29	13.04	12.50	12.34	12.00	0.70	0.50	4.92	4.00	4.92
Royster's Truckers Delight 4-8-4 (2787; 3962; 4761; 4742; 4342; 3617)	3.36	3.29	9.86	8.50	9.29	8.00	0.57	0.50	4.20	4.00	4.20
Royster's Verbena Guano 5-8-5 (4027; 3196)	4.12	4.11	9.37	8.50	8.71	8.00	0.66	0.50	5.25	5.00	5.25
E. W. RUPERT, Oxford, Pa.											
Complete Potato Manure (3248)	2.40	2.47	9.91	9.00	9.27	8.00	0.64	1.00	*9.37	10.00	9.37
Royal Plant Food (3247)	1.82	1.65	14.40	11.00	*9.56	10.00	4.84	1.00	5.54	5.00	5.54
Sure Crop (3249)	1.70	1.65	8.94	9.00	8.18	8.00	0.76	1.00	5.01	5.00	5.01

*Deficient

TABLE III. ANALYSES OF SAMPLES OF COMPLETE FERTILIZERS — FURNISHING NITROGEN, PHOSPHORIC ACID AND POTASH

MANUFACTURER AND BRAND NAME	NITROGEN		PHOSPHORIC ACID						POTASH		
			Total		Available		Insoluble				
	Found	Guar.	Found	Guar.	Found	Guar.	Found	Guar.	Found	Guar.	As Muriate
	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.
CHARLES H. SEIBERT, Myerstown, Pa.											
Grade No. 1 2-10-5 (2623)	1.87	1.64	12.04	11.00	11.26	10.00	0.78	1.00	5.27	5.00	5.27
Grade No. 2 2-8-10 (2622)	1.73	1.64	9.49	9.00	8.87	8.00	0.62	1.00	10.21	10.00	10.21
Grade No. 4 4-8-6 (2621)	3.18	3.28	10.00	9.00	9.28	8.00	0.72	1.00	5.96	6.00	5.96
Grade No. 6 4-16-10 (2624)	3.19	3.28	16.54	17.00	16.28	16.00	0.26	1.00	9.84	10.00	9.84
SHIPPENSBURG FERTILIZER CO., Shippensburg, Pa.											
Old Reliable Commonwealth Brand 1-9-4 (2470)	1.03	0.82	9.93	9.50	9.73	9.00	0.20	0.50	3.92	4.00	3.92
Old Reliable Commonwealth Brand 1-9-4 (4363)	0.82	0.82	8.93	9.50	*8.29	9.00	0.64	0.50	4.86	4.00	4.86
Old Reliable Tip Top 2-8-5 (2471)	*1.38	1.65	9.41	8.50	8.89	8.00	0.52	0.50	5.00	5.00	5.00
Old Reliable Tip Top 2-8-5 (4364)	1.56	1.65	9.29	8.50	8.25	8.00	1.04	0.50	5.36	5.00	5.36
M. L. SHOEMAKER & CO., INC., Philadelphia, Pa.											
Shoemaker's Swift Sure 1-9-4 Guano (4535)	0.78	0.82	10.56	10.00	9.72	9.00	0.84	1.00	4.02	4.00	4.02
Shoemaker's Swift Sure 2-8-5 General Grower (4534)	*1.32	1.64	9.43	9.00	8.83	8.00	0.60	1.00	5.84	5.00	5.84
Shoemaker's Swift Sure 2-8-10 Potato Grower (4533)	1.48	1.64	10.49	9.00	9.89	8.00	0.60	1.00	11.21	10.00	11.21
Shoemaker's Swift Sure 2-12-6 (4532)	*1.25	1.64	13.28	13.00	12.84	12.00	0.44	1.00	6.42	6.00	6.42
Shoemaker's Swift Sure 3-8-3 Superphosphate General Use (4115)	2.55	2.46	10.03	9.00	8.73	8.00	1.30	1.00	3.07	3.00	3.07
Shoemaker's Swift Sure 3-10-6 High Grade Complete Fertilizer (3507)	2.85	2.46	12.91	11.00	11.61	10.00	1.30	1.00	5.82	6.00	5.82
Shoemaker's Swift Sure 4-8-7 Potato Grower (4116)	3.26	3.28	9.56	9.00	8.25	8.00	1.30	1.00	*6.67	7.00	6.67
Shoemaker's Swift Sure 5-8-7 Potato Special (4010)	4.11	4.10	9.31	10.00	8.73	8.00	0.58	2.00	7.80	7.00	7.80
SHUR-GRO FERTILIZER CORPORATION, Sharpsburg, Pa.											
Shur-Gro (3942; 2756)	2.96	3.00	9.83	8.50	8.78	8.00	1.05	0.50	12.59	12.00	12.59
Shur-Gro (4731)	3.39	3.00	9.21	8.50	*7.73	8.00	1.48	0.50	12.00	12.00	12.00
THE SMITH AGRICULTURAL CHEMICAL CO., Columbus, Ohio											
Sacco 2-8-10 (3182; 4200; 4106)	2.07	2.00	9.66	8.30	8.63	8.00	1.03	0.30	9.97	10.00	9.97
Sacco 2-12-2 (2857)	2.16	2.00	13.80	----	12.38	12.00	1.42	----	2.09	2.00	2.09
Sacco 2-12-6 (3308)	2.02	2.00	12.95	----	*11.65	12.00	1.30	----	6.20	6.00	6.20
Sacco 4-8-6 (2854; 4108)	4.11	4.00	9.31	----	8.48	8.00	0.83	----	6.24	6.00	6.24
Sacco 4-12-4 (3689; 3941; 2855; 4109)	4.15	4.00	13.48	----	12.41	12.00	1.07	----	4.39	4.00	4.39
Sacco Plant Food (2585; 2859)	4.32	4.00	13.63	12.50	12.84	12.00	0.79	0.50	4.48	4.00	4.48
SOMERSET COUNTY FERTILIZER WORKS, Somerset, Pa.											
Bear Brand Fertilizer 2-8-5 (4495)	2.02	1.65	8.81	8.50	*7.77	8.00	1.04	0.50	5.52	5.00	5.52
Bear Brand Fertilizer 2-8-10 (4510)	1.87	1.65	8.73	8.50	7.93	8.00	0.80	0.50	10.43	10.00	10.43
Bear Brand Super Fish (4498; 4508)	2.02	1.65	13.45	12.50	12.39	12.00	1.06	0.50	6.70	6.00	6.70
STANDARD CHEMICAL WORKS INC., Reading, Pa.											
All Crops (2828)	1.73	1.64	13.38	13.00	12.54	12.00	0.84	1.00	2.09	2.00	2.09
Banner Potato (3789; 3535)	2.32	2.46	13.87	13.00	12.92	12.00	0.95	1.00	5.10	5.00	5.10
Big Crop (2669)	3.31	3.28	13.32	13.00	12.90	12.00	0.42	1.00	*3.73	4.00	3.73
Cheapest In-The-End (4715; 2989; 3736; 3587)	3.38	3.28	9.47	9.00	8.71	8.00	0.76	1.00	6.04	6.00	6.04
Fish and Potash (2980)	1.81	1.64	10.65	10.00	9.75	9.00	0.90	1.00	*2.80	3.00	2.80
Fish Guano (4697)	1.65	1.64	12.50	13.00	*11.74	12.00	0.76	1.00	4.04	4.00	4.04
Fish Guano (4414)	1.71	1.64	11.72	13.00	*11.04	12.00	0.68	1.00	*2.95	4.00	2.95
Fish Guano (3790)	2.37	1.64	11.36	13.00	*10.34	12.00	1.02	1.00	*3.53	4.00	3.53
High Standard Fertilizer Double Strength (4412)	3.14	3.28	15.48	17.00	*14.84	16.00	0.64	1.00	4.05	4.00	4.05
Peerless Mixture (4714; 4698; 3791; 3534)	1.69	1.69	9.40	9.00	8.51	8.00	0.89	1.00	5.04	5.00	5.04
Peerless Mixture (2666)	1.65	1.64	8.92	9.00	8.42	8.00	0.50	1.00	*4.56	5.00	4.56
Peerless Mixture (4417)	1.67	1.64	8.50	9.00	*7.78	8.00	0.72	1.00	5.00	5.00	5.00
Potato and Truck (2979; 3588)	1.67	1.64	10.00	9.00	8.29	8.00	1.71	1.00	10.86	10.00	10.86
Potato and Truck (2667)	1.66	1.64	9.73	9.00	9.03	8.00	0.70	1.00	*9.64	10.00	9.64
Potato and Truck (2826)	1.69	1.64	10.00	9.00	9.64	8.00	0.36	1.00	*9.38	10.00	9.38
Potato and Truck (4416)	1.65	1.64	8.69	9.00	8.01	8.00	0.68	1.00	*9.65	10.00	9.65
Tankage and Potash Mixture (3737)	*0.60	0.82	11.74	10.00	10.46	9.00	1.28	1.00	4.63	4.00	4.63

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MANUFACTURER AND BRAND NAME	NITROGEN		PHOSPHORIC ACID						POTASH		
			Total		Available		Insoluble				
	Found	Guar.	Found	Guar.	Found	Guar.	Found	Guar.	Found	Guar.	As Muriate
	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.
Tip Top Brand (4549)	1.86	1.64	12.99	13.00	12.43	12.00	0.56	1.00	6.41	6.00	6.41
Tip Top Brand (4413)	1.67	1.64	11.96	13.00	*11.56	12.00	0.40	1.00	6.89	6.00	6.89
Tip Top Brand (3533)	1.83	1.64	13.56	13.00	12.66	12.00	0.90	1.00	*5.33	6.00	5.33
Truckers' Success (2827)	4.21	4.10	11.47	11.00	10.95	10.00	0.52	1.00	4.88	5.00	4.88
Truckers' Success (2990)	4.33	4.10	11.58	11.00	10.92	10.00	0.66	1.00	*4.79	5.00	4.79
STANDARD WHOLESALE PHOSPHATE & ACID WORKS, INC., Baltimore, Md.											
3-5-12 (4136)	2.64	2.47	6.37	5.50	5.83	5.00	0.54	0.50	13.52	12.00	----
3-10-6 (2963)	2.65	2.47	11.62	10.50	10.96	10.00	0.66	0.50	6.21	6.00	6.21
Big 4 Crop Grower (3478; 3734; 4602)	1.32	0.82	10.65	9.50	9.39	9.00	1.26	0.50	5.19	4.00	5.19
Champion Potato Grower (3189; 3484)	2.61	2.47	13.60	12.50	12.54	12.00	1.06	0.50	5.81	5.00	5.81
Evergreen Fish Guano (3603)	3.57	3.30	9.54	8.50	9.02	8.00	0.52	0.50	4.22	4.00	4.22
Farmers Delight (3785; 2951; 3526)	2.84	2.47	13.38	12.50	12.71	12.00	0.67	0.50	6.39	6.00	6.39
Fish, Bone and Potash (3968)	4.16	4.11	9.48	8.50	8.84	8.00	0.64	0.50	7.15	7.00	7.15
General Use Guano (3784; 3525; 4564; 4379)	1.93	1.65	13.42	12.50	12.39	12.00	1.03	0.50	4.53	4.00	4.53
High Analysis (3485; 3966)	3.47	3.30	17.45	16.50	16.42	18.00	1.03	0.50	4.50	4.00	4.50
Ideal Potato Grower (3911; 3527)	3.39	3.30	9.61	8.50	8.94	8.00	0.67	0.50	8.32	6.00	6.32
Mammoth Potato Grower (2947; 4620; 3904; 3154; 3523)	1.85	1.65	9.12	8.50	8.64	8.00	0.48	0.50	10.35	10.00	10.35
Mammoth Truck Grower (3606; 3156; 4377; 3524; 4543)	1.73	1.65	9.75	8.50	8.86	8.00	0.89	0.50	5.25	5.00	5.25
Mammoth Truck Grower (4655)	1.96	1.65	10.26	8.50	9.66	8.00	0.60	0.50	*4.40	5.00	4.40
Royal Potato Grower (3604; 2964; 3522)	3.83	3.30	9.69	8.50	8.93	8.00	0.76	0.50	7.06	7.00	7.06
Service Mixture (2948; 3188)	1.87	1.65	13.80	12.50	12.51	12.00	1.29	0.50	6.05	6.00	6.05
SUMMERS FERTILIZER CO., INC., Baltimore, Md.											
Summer's 1-9-4 Fertilizer (3498; 2927; 4710; 4468)	1.08	0.82	10.25	9.50	9.58	9.00	0.67	0.50	3.96	4.00	3.96
Summer's 2-8-5 Fertilizer (2677; 2745; 4018; 2791; 2924)	1.83	1.65	10.31	8.50	9.44	8.00	0.87	0.50	5.34	5.00	5.34
Summer's 2-8-10 Fertilizer (3834; 2672; 3712)	1.82	1.65	10.03	8.50	9.18	8.00	0.85	0.50	10.13	10.00	10.13
Summer's 2-8-10 Fertilizer (2928)	1.91	1.65	10.22	8.50	9.20	8.00	1.02	0.50	*9.59	10.00	9.59
Summer's 2-8-10 Fertilizer (4711)	1.74	1.65	9.39	8.50	8.91	8.00	0.48	0.50	*9.67	10.00	9.67
Summer's 2-8-10 Fertilizer (4360)	1.69	1.65	10.13	8.50	9.33	8.00	0.80	0.50	*9.65	10.00	9.65
Summer's 2-8-10 Fertilizer (4538)	1.73	1.65	9.29	8.50	8.49	8.00	0.80	0.50	*9.75	10.00	9.75
Summer's 2-12-2 Fertilizer (2743)	2.14	1.65	13.88	12.50	12.54	12.00	1.34	0.50	2.85	2.00	1.50
Summer's 2-12-4 Fertilizer (4747; 4361; 3710)	1.77	1.65	13.51	12.50	12.25	12.00	1.26	0.50	4.64	4.00	4.64
Summer's 2-12-4 Fertilizer (2784)	2.70	1.65	12.69	12.50	*11.71	12.00	0.98	0.50	3.88	4.00	3.88
Summer's 2-12-6 Fertilizer (3371; 4537)	1.86	1.65	13.60	12.50	12.60	12.00	1.00	0.50	6.38	6.00	6.38
Summer's 2-12-6 Fertilizer (3499)	2.24	1.65	13.98	12.50	12.54	12.00	1.42	0.50	*5.64	6.00	5.64
Summer's 2-16-8 Fertilizer (2925)	1.91	1.65	17.18	16.50	16.32	16.00	0.86	0.50	*7.58	8.00	7.58
Summer's 3-10-6 Fertilizer (3709)	2.81	2.47	10.55	10.50	10.19	10.00	0.36	0.50	6.60	6.00	6.60
Summer's 3-12-5 Fertilizer (3388)	2.58	2.47	14.29	12.50	13.11	12.00	1.18	0.50	5.24	5.00	5.24
Summer's 4-8-4 Fertilizer (2798)	* 3.02	3.29	9.50	8.50	8.58	8.00	0.92	0.50	4.33	4.00	4.33
Summer's 4-8-7 Fertilizer (2675; 2794)	3.30	3.29	10.01	8.50	9.47	8.00	0.54	0.50	7.44	7.00	7.44
Summer's 4-8-7 Fertilizer (3829)	*2.81	3.29	9.13	8.50	7.95	8.00	1.18	0.50	10.50	7.00	10.50
Summer's 4-8-7 Fertilizer (2921)	3.37	3.29	10.23	8.50	9.19	8.00	1.04	0.50	*6.77	7.00	6.77
Summer's 4-8-10 Fertilizer (2795)	3.52	3.29	10.47	8.50	9.89	8.00	0.58	0.50	*9.24	10.00	9.24
Summer's 5-8-5 Fertilizer (2800)	*3.87	4.11	10.14	8.50	9.72	8.00	0.42	0.50	5.78	5.00	5.78
Summer's 5-8-5 Fertilizer (2923)	4.07	4.11	10.40	8.50	9.60	8.00	0.80	0.50	5.39	5.00	5.39
Summer's 5-8-8 Fertilizer (3711)	4.56	4.11	9.01	8.50	8.25	8.00	0.76	0.50	8.53	8.00	8.53
Summer's 5-10-5 Fertilizer (3706)	4.09	4.11	13.98	10.50	13.08	10.00	0.90	0.50	7.05	5.00	7.05
SWACKS FERTILIZER CO., DuBois, Pa.											
Swacks' Double Analysis 2-16-8 (4040)	1.68	1.65	17.90	16.50	16.74	16.00	1.16	0.50	*7.70	8.00	7.70
Swacks' Double Analysis 2-16-8 (4070)	1.68	1.65	17.11	16.60	16.07	16.00	1.04	0.50	7.90	8.00	7.90
Swacks' Eight-Sixteen-Fourteen (4068)	*6.71	6.58	14.84	16.50	*14.60	16.00	0.24	0.50	15.19	14.00	15.19
Swacks' Four-Eight-Seven (3756)	*2.77	3.30	9.64	9.00	8.88	8.00	0.76	1.00	7.13	7.00	7.13
Swacks' Four-Eight-Seven (4734)	*2.82	3.30	7.80	9.00	*7.56	8.00	0.24	1.00	7.09	7.00	7.09
Swacks' Four-Sixteen-Four (4066; 4770)	3.26	3.30	17.45	16.50	16.59	16.00	0.86	0.50	4.34	4.00	4.34
Swacks' General Crop Grower 1-9-4 (3416; 4678; 4797; 4735)	0.93	0.82	9.77	10.00	9.40	9.00	0.37	1.00	4.19	4.00	4.19

*Deficient

TABLE III. ANALYSES OF SAMPLES OF COMPLETE FERTILIZERS — FURNISHING NITROGEN, PHOSPHORIC ACID AND POTASH

MANUFACTURER AND BRAND NAME	NITROGEN		PHOSPHORIC ACID						POTASH		
	Found	Guar.	Total		Available		Insoluble		Found	Guar.	As Muriate
			Found	Guar.	Found	Guar.	Found	Guar.			
	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.
Swacks' General Crop Grower 1-9-4 (4463)	0.83	0.82	9.39	10.00	*8.63	9.00	0.76	1.00	4.00	4.00	4.00
Swacks' High Grade Potato Grower 4-12-6 (4769)	3.55	3.30	13.33	13.00	*11.41	12.00	1.92	1.00	6.03	6.00	6.03
Swacks' High Grade Potato Grower 4-12-6 (4103)	3.27	3.30	12.37	13.00	11.81	12.00	0.56	1.00	6.32	6.00	6.32
Swacks' Potato and Truck 2-8-10 (4190; 4676; 3375; 3178; 3755)	1.64	1.65	9.07	9.00	8.41	8.00	0.66	1.00	10.42	10.00	10.42
Swacks' Special 2-10-6 (3757; 4796)	1.86	1.65	10.94	11.00	10.53	10.00	0.41	1.00	6.24	6.00	6.24
Swacks' Special 2-10-6 (4189)	1.68	1.65	12.13	11.00	11.09	10.00	1.04	1.00	*5.24	6.00	5.24
Swacks' Special Top Dressing 4-8-5 (4188; 4104)	3.40	3.30	9.08	9.00	8.28	8.00	0.80	1.00	5.17	5.00	5.17
Swacks' Special Top Dressing 4-8-5 (4679)	3.30	3.30	8.61	9.00	*7.77	8.00	0.84	1.00	5.19	5.00	5.19
Swacks' Special Top Dressing 4-8-5 (3361)	3.18	3.30	10.46	9.00	8.88	8.00	1.58	1.00	*4.77	5.00	4.77
Swacks' Two-Eight-Five (4044)	*1.41	1.65	9.10	9.00	8.54	8.00	0.56	1.00	4.98	5.00	4.98
Swacks' Two-Eight-Five (4677)	1.96	1.65	8.73	9.00	8.37	8.00	0.36	1.00	*4.46	5.00	4.46
Swacks' Two-Eight-Five (3176)	1.65	1.65	9.40	9.00	8.82	8.00	0.58	1.00	5.00	5.00	5.00
Swacks' Two-Eight-Five (4795)	1.97	1.65	8.53	9.00	8.01	8.00	0.52	1.00	*4.56	5.00	4.56
Swacks' Two-Eight-Five (4733)	*1.41	1.65	7.72	9.00	*7.40	8.00	0.32	1.00	6.09	5.00	6.09
Swacks' Two-Eight-Five (4105)	*1.45	1.65	9.83	9.00	8.99	8.00	0.84	1.00	4.83	5.00	4.83
Swacks' Wheat Fertilizer 2-12-2 (4659; 3363)	1.77	1.65	13.64	13.00	13.07	12.00	0.57	1.00	2.09	2.00	2.09
SWIFT & COMPANY, Baltimore, Md.											
Swift's Red Steer 1-9-4 (4281; 3127; 4258; 3239; 3073; 3086; 4657)	0.97	0.82	9.65	9.00	9.33	9.00	0.32	----	4.03	4.00	4.03
Swift's Red Steer 2-8-5 (2852; 2809; 4282; 4760; 3299; 3373; 2540; 4812)	1.69	1.65	9.53	8.00	8.94	8.00	0.59	----	5.13	5.00	5.13
Swift's Red Steer 2-8-5 (3129)	1.68	1.65	8.21	8.00	7.83	8.00	0.38	----	*4.41	5.00	4.41
Swift's Red Steer 2-8-10 (4194; 3374; 4621; 4076)	1.72	1.65	9.45	8.00	8.47	8.00	0.98	----	10.25	10.00	10.25
Swift's Red Steer 2-8-10 (2850)	1.90	1.65	9.38	8.00	8.50	8.00	0.88	----	*9.80	10.00	9.80
Swift's Red Steer 2-8-10 (2808)	1.85	1.65	9.38	8.00	9.24	8.00	0.14	----	*9.53	10.00	9.53
Swift's Red Steer 2-8-10 (4271)	1.72	1.65	9.17	8.00	8.93	8.00	0.24	----	*9.52	10.00	9.52
Swift's Red Steer 2-8-10 (2541)	1.67	1.65	9.08	8.00	8.90	8.00	0.18	----	*9.66	10.00	9.66
Swift's Red Steer 2-12-2 (4192; 4607; 4766; 3277; 4749; 4077)	1.80	1.65	13.24	12.00	12.31	12.00	0.93	----	2.23	2.00	2.23
Swift's Red Steer 2-12-4 (4283; 2539; 3787; 3857)	1.68	1.65	13.04	12.00	12.37	12.00	0.67	----	4.21	4.00	4.21
Swift's Red Steer 2-12-4 (4276)	1.68	1.65	12.95	12.00	12.59	12.00	0.36	----	*3.77	4.00	3.77
Swift's Red Steer 2-16-8 (4622)	1.82	1.65	17.04	16.00	16.68	16.00	0.36	----	8.88	8.00	8.88
Swift's Red Steer 3-8-5 (2917)	2.64	2.47	9.62	8.00	8.90	8.00	0.72	----	5.13	5.00	5.13
Swift's Red Steer 3-10-6 (2916; 4618; 3467; 3222)	2.48	2.47	10.87	10.00	10.19	10.00	0.68	----	6.26	6.00	6.26
Swift's Red Steer 4-8-4 (3128)	3.30	3.29	8.93	8.00	8.43	8.00	0.50	----	*3.67	4.00	3.67
Swift's Red Steer 4-8-4 (2831)	3.18	3.29	9.46	8.00	9.06	8.00	0.40	----	4.31	4.00	4.31
Swift's Red Steer 4-8-7 (2851; 3971; 3302; 3372; 3235)	3.36	3.29	9.32	8.00	8.66	8.00	0.66	----	7.13	7.00	7.13
Swift's Red Steer 4-8-7 (2543)	3.43	3.29	9.59	8.00	9.07	8.00	0.52	----	*6.79	7.00	6.79
Swift's Red Steer 4-8-10 (4035)	3.10	3.29	9.59	8.00	9.15	8.00	0.44	----	10.55	10.00	10.55
Swift's Red Steer 4-12-4 (4195; 2847; 3958; 3300; 4786)	3.38	3.29	13.79	12.00	12.86	12.00	0.93	----	4.13	4.00	4.13
Swift's Red Steer 4-16-4 (4787; 3274; 4750; 4078)	3.45	3.29	18.09	16.00	16.91	16.00	1.18	----	4.31	4.00	4.31
Swift's Red Steer 4-16-10 (3238; 4124)	3.43	3.29	18.31	16.00	17.13	16.00	1.18	----	10.85	10.00	10.85
Swift's Red Steer 5-8-5 (4788)	*3.66	4.11	9.24	8.00	8.52	8.00	0.72	----	4.85	5.00	4.85
Swift's Red Steer 5-8-5 (3278)	3.93	4.11	9.87	8.00	9.43	8.00	0.44	----	4.85	5.00	4.85
Swift's Red Steer 5-8-7 (4125)	4.09	4.11	8.81	8.00	8.13	8.00	0.68	----	*6.66	7.00	6.66
Swift's Red Steer 5-8-7 (3753)	3.95	4.11	9.16	8.00	8.46	8.00	0.70	----	7.22	7.00	7.22
Swift's Red Steer 7-6-5 (4126)	5.85	5.76	6.94	6.00	6.66	6.00	0.28	----	*4.57	5.00	4.57
Swift's Red Steer 8-16-14 (3969; 3650; 4127)	6.73	6.56	17.39	16.00	16.80	16.00	0.59	----	15.21	14.00	15.21
Swift's Red Steer 8-16-14 (3681)	6.40	6.56	17.97	16.00	17.43	16.00	0.54	----	*13.31	14.00	13.31
Vigoro (3922; 2765; 3841; 2575; 4732)	4.23	4.00	14.15	12.50	13.11	12.00	1.04	0.50	4.44	4.00	4.44
TENNESSEE COPPER & CHEMICAL CORPORATION, New York, N. Y.											
Loma (3085; 2583)	5.34	5.00	11.62	10.65	10.98	10.00	0.64	0.65	4.49	4.00	4.49
I. P. THOMAS & SON CO., Philadelphia, Pa.											
Champion Guano 2-10-6 (2601; 2971)	1.78	1.65	12.07	11.00	11.43	10.00	0.64	1.00	6.46	6.00	6.46
Economy Fertilizer 3-12-3 (3203)	2.77	2.45	13.64	13.00	12.00	12.00	1.64	1.00	3.77	3.00	1.90
Long Island Special 4-8-7 (2977; 3240)	3.60	3.25	9.97	9.00	9.01	8.00	0.96	1.00	7.45	7.00	7.45
Long Island Special 4-8-7 (3204)	3.28	3.25	10.33	9.00	9.21	8.00	1.12	1.00	*6.62	7.00	6.62

*Deficient

TABLE III. ANALYSES OF SAMPLES OF COMPLETE FERTILIZERS — FURNISHING NITROGEN, PHOSPHORIC ACID AND POTASH

MANUFACTURER AND BRAND NAME	NITROGEN		PHOSPHORIC ACID						POTASH		
	Found	Guar.	Total		Available		Insoluble		Found	Guar.	As Muriate
			Found	Guar.	Found	Guar.	Found	Guar.			
	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.
Royal Fish Guano 4-8-5 (2970)	3.78	3.25	11.07	9.00	9.33	8.00	1.74	1.00	5.84	5.00	5.84
Special Potato 2-8-10 (4553; 3241)	1.90	1.65	9.74	9.00	8.46	8.00	1.28	1.00	10.13	10.00	10.13
Special Potato 2-8-10 (2975)	1.83	1.65	10.46	9.00	9.16	8.00	1.30	1.00	*9.60	10.00	9.60
Thomas 1-9-4 (4440; 2966)	0.88	0.82	11.09	10.00	9.70	9.00	1.39	1.00	4.10	4.00	4.10
Tip Top Superphosphate 3-10-6 (2599; 4648)	2.67	2.45	11.94	11.00	10.47	10.00	1.47	1.00	6.53	6.00	6.53
Victor Potash Fertilizer 2-8-5 (2600; 4437; 2967; 3242)	1.82	1.65	10.22	9.00	8.69	8.00	1.53	1.00	5.49	5.00	5.49
F. W. TUNNELL & CO., INC., Philadelphia, Pa.											
Fish Manure with Potash (3540; 4523)	2.03	1.64	13.02	11.00	12.14	10.00	0.88	1.00	6.08	6.00	6.08
Nassau County Potato Manure (3599)	4.83	4.10	10.40	9.00	9.26	8.00	1.14	1.00	5.80	5.00	5.80
Red Diamond Potato and Truck Guano (4522; 3653)	1.94	1.64	10.47	9.00	9.68	8.00	0.79	1.00	10.91	10.00	10.91
Standard Cereal Manure (2665; 4521)	1.89	1.64	14.24	13.00	13.35	12.00	0.89	1.00	4.61	4.00	4.61
Three "M" Potato Manure (3600; 2664)	3.66	3.28	9.91	9.00	9.48	8.00	0.43	1.00	7.61	7.00	7.61
Two Fold Produce Manure (3885)	3.60	3.28	17.63	17.00	16.71	16.00	0.92	1.00	4.73	4.00	4.73
Veribest Cereal Manure (3654; 3889)	1.87	1.64	10.20	9.00	9.54	8.00	0.66	1.00	5.17	5.00	5.17
UNION CHEMICAL WORKS, INC., North Wales, Pa.											
Grain and Grass Grower (3652)	1.79	1.64	10.29	9.00	9.49	8.00	0.80	1.00	5.50	5.00	5.50
High Grade Vegetable Guano (3651)	3.40	3.28	9.68	8.00	9.00	7.00	0.68	1.00	7.39	7.00	7.39
VIRGINIA-CAROLINA CHEMICAL CORPORATION, Baltimore, Md.											
Bloomaid (2586)	5.03	4.95	11.56	----	11.30	10.00	0.26	----	5.16	4.00	----
V-C Cereal Brand Fertilizer (2537; 3609)	1.99	1.65	11.39	10.00	10.25	9.00	1.14	1.00	3.47	3.00	3.47
V-C Double Owl Brand (2782; 3735; 2536; 2632; 3838)	3.45	3.29	10.43	9.00	9.34	8.00	1.09	1.00	7.39	7.00	7.39
V-C Fish and Potash Compound (3304; 4790; 3183; 3690; 4632; 2781; 4513;4340)	1.88	1.65	10.95	10.00	9.66	9.00	1.29	1.00	3.43	3.00	3.43
V-C Game Cock Brand (2636)	*3.86	4.11	10.52	9.00	9.70	8.00	0.82	1.00	4.88	5.00	4.88
V-C Game Cock Brand (3620)	4.20	4.11	10.37	9.00	8.53	8.00	1.84	1.00	5.07	5.00	5.07
V-C Good Luck Fertilizer (2535; 4542; 4512)	2.53	2.47	12.43	11.00	11.40	10.00	1.03	1.00	6.07	6.00	6.07
V-C Indian Brand Fertilizer (2538; 3903; 3607)	1.79	1.65	9.74	9.00	9.08	8.00	0.66	1.00	10.08	10.00	10.08
V-C Owl Brand Fertilizer (4065; 3879; 4636; 2944; 4541; 4251; 3836;4599)	1.91	1.65	13.99	13.00	12.81	12.00	1.18	1.00	4.50	4.00	4.50
V-C Pennsylvania Potato Producer (3184; 2633; 3621)	3.33	3.29	14.11	13.00	13.04	12.00	1.07	1.00	5.19	5.00	5.19
V-C Plow Brand Fertilizer (4635; 2779; 4608; 4539; 4252; 4455; 3839; 3502; 3900; 4339)	1.84	1.65	9.88	9.00	9.00	8.00	0.88	1.00	5.32	5.00	5.32
V-C Prolific Crop Grower (4631)	*3.08	3.29	13.23	13.00	12.39	12.00	0.84	1.00	4.48	4.00	4.48
V-C Prolific Crop Grower (3622)	3.46	3.29	15.15	13.00	13.25	12.00	1.90	1.00	4.46	4.00	4.46
V-C Star Brand Fertilizer (3355; 4634; 3043; 4606; 4540; 4511; 4351; 3627)	1.14	0.82	10.69	10.00	9.78	9.00	0.91	1.00	4.46	4.00	4.46
V-C Star Brand Fertilizer (4452)	0.98	0.82	9.64	10.00	*8.76	9.00	0.88	1.00	4.52	4.00	4.52
V-C Super 26 Fertilizer (4250)	1.79	1.65	17.71	17.00	16.55	16.00	1.16	1.00	8.72	8.00	8.72
V-C Valley Pride (4633; 3700)	1.77	1.65	15.02	13.00	13.47	12.00	1.55	1.00	2.39	2.00	2.39
YORK CHEMICAL WORKS, York, Pa.											
Dempwolf's 2-12-4 (3692; 2420; 4152)	1.71	1.64	13.33	12.00	12.50	12.00	0.83	----	4.28	4.00	4.28
Dempwolf's 4-8-7 (3408; 4201; 4629; 3503; 4022; 2432)	3.53	3.28	9.20	8.00	8.66	8.00	0.54	----	7.81	7.00	7.81
Dempwolf's 4-16-10 (3409; 3480; 2430)	3.47	3.28	17.26	16.00	16.63	16.00	0.63	----	10.51	10.00	10.51
Dempwolf's 3-5-12 for Tobacco (2424)	2.88	2.46	6.38	5.00	6.04	5.00	0.34	----	12.96	12.00	----
Dempwolf's General Crop (3265; 3589; 4151)	2.44	2.46	11.58	10.00	10.61	10.00	0.97	----	4.93	4.00	4.93
Dempwolf's General Crop (2423)	*2.18	2.46	10.88	10.00	10.04	10.00	0.84	----	5.29	4.00	5.29
Dempwolf's Grain Special (4324; 3691; 3505; 2428; 4153)	1.84	1.64	13.68	12.00	12.64	12.00	1.04	----	2.65	2.00	2.65
Dempwolf's High Test (3825)	*6.08	6.56	16.51	16.00	*15.67	16.00	0.84	----	13.90	14.00	13.90
Dempwolf's High Test (2435)	6.82	6.56	17.27	16.00	16.95	16.00	0.32	----	14.10	14.00	14.10
Dempwolf's Potato and Truck (3410; 3693; 2422)	4.29	4.10	9.05	8.00	8.42	8.00	0.63	----	8.33	7.00	----
Dempwolf's R. B. Special (2429)	2.08	1.64	12.77	10.00	11.91	10.00	0.86	----	5.20	4.00	----
Dempwolf's Special Mixture (3921)	3.73	----	14.78	----	12.46	10.00	2.32	3.00	7.62	7.00	----
Dempwolf's Spring Special (3593; 4470; 3461; 2427)	1.77	1.64	8.72	8.00	8.21	8.00	0.51	----	10.95	10.00	10.95
Dempwolf's Standard (3443; 4628; 4020; 2426; 4150)	1.70	1.64	8.98	8.00	8.32	8.00	0.66	----	5.34	5.00	5.34
Dempwolf's Standard (4267)	1.62	1.64	8.93	8.00	8.61	8.00	0.32	----	*4.75	5.00	4.75
Dempwolf's Standard (4012)	1.72	1.64	8.56	8.00	*7.76	8.00	0.80	----	5.66	5.00	5.66

*Deficient

TABLE III. ANALYSES OF SAMPLES OF COMPLETE FERTILIZERS — FURNISHING NITROGEN, PHOSPHORIC ACID AND POTASH

MANUFACTURER AND BRAND NAME	NITROGEN		PHOSPHORIC ACID						POTASH		
			Total		Available		Insoluble				
	Found	Guar.	Found	Guar.	Found	Guar.	Found	Guar.	Found	Guar.	As Muriate
	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.
Dempwolf's Standard Potash (4268; 2431)	0.97	0.82	10.21	9.00	9.64	9.00	0.57	----	4.50	4.00	4.50
Dempwolf's Top Dreeser (3411)	5.76	5.74	7.60	6.00	6.50	6.00	1.10	----	5.57	5.00	5.57
Dempwolf's Top Dresser (2421)	*5.40	5.74	6.74	6.00	6.52	6.00	0.22	----	5.52	5.00	5.52
Average	2.35	----	11.23	----	10.39	----	0.84	----	5.84	----	----

*Deficient

TABLE IV. GROUND BONE FERTILIZERS—FURNISHING NITROGEN AND PHOSPHORIC ACID

MANUFACTURER AND BRAND NAME	NITROGEN		PHOSPHORIC ACID	
	Found	Guar.	Found	Guar.
	P. ct.	P. ct.	P. ct.	P. ct.
THE AMERICAN AGRICULTURAL CHEMICAL COMPANY, New York, N. Y.				
Fine Ground Bone (4803; 4299; 3140; 2692; 3940; 4730; 4725; 3883)	2.72	2.47	25.32	22.88
Pure Raw Bone (4036)	3.95	3.70	22.45	20.60
ARMOUR FERTILIZER WORKS, Baltimore, Md.				
Armour's Big Crop Bone Meal (2875; 3294; 2762; 3601)	3.07	2.47	24.21	22.00
Armour's Big Crop Raw Bone Meal (3559; 4354)	4.13	3.70	21.84	21.50
Armour's Big Crop Raw Bone Meal (3877)	3.86	3.70	*18.31	21.50
Armour's Big Crop Raw Bone Meal (2935)	4.18	3.70	*20.73	21.50
ASSOCIATED CHEMICAL CO., Baltimore, Md.				
Associated Fine Bone Meal (3832; 4198; 2937)	2.70	2.47	26.98	23.00
Associated Pure Raw Bone (3476)	*3.25	3.70	*17.83	20.00
THE BAUGH & SONS COMPANY, Philadelphia, Pa.				
Baugh's 3 and 50 Bone Meal (2582; 4396)	2.86	2.47	26.15	23.00
Baugh's 3 and 50 Bone Meal (2502)	*2.17	2.47	27.78	23.00
Baugh's Raw Bone Meal (4110; 2733; 2487; 3943; 2776)	3.97	3.70	24.19	21.50
W. S. CAPLES & SON, Johnstown, Pa.				
Cambria's Bone Meal (3564)	2.73	2.47	26.58	23.00
Cambria's Bone Meal (4493)	*2.26	2.47	26.24	23.00
COOPERATIVE G. L. F. EXCHANGE, INC., Rochester, N. Y.				
G. L. F. Raw Bone Meal (3614; 4052)	4.00	3.70	21.90	20.60
G. L. F. Steamed Bone Meal (4053)	3.43	2.47	23.31	22.00
JACOB DOLD PACKING CO., Buffalo, N. Y.				
Dold's Quality Bone Meal (3181; 4277)	2.55	2.47	25.72	23.00
GRIFFITH & BOYD CO., Baltimore, Md.				
Pure Fine Ground Bone Meal (3952; 3565; 4491)	4.19	3.70	21.82	20.00
INDEPENDENT MANUFACTURING CO., Philadelphia, Pa.				
Independent's 4½-45 Bone Meal (2811)	*3.39	3.70	24.10	20.50
LANCASTER CHEMICAL CO., Lancaster, Pa.				
No. 9 Bone Meal (2466)	3.94	3.28	*21.74	22.00
FRED E. LORD, Espy, Pa.				
Raw Bone Meal (2993)	3.82	3.70	24.41	20.00
Steam Bone (2992)	2.76	2.46	24.62	22.00
G. OBER & SONS CO., Baltimore, Md.				
Ober's Refined Bone Meal (3314)	3.01	2.47	26.42	22.00
F. S. ROYSTER GUANO CO., Baltimore, Md.				
Royster's Fine Ground Bone Meal (2713; 3619)	2.84	2.47	26.19	22.90
Royster's Fine Ground Bone Meal (4028)	2.91	2.47	*19.81	22.90
Royster's Fine Ground Bone Meal (3318)	*2.19	2.47	24.48	22.90
Royster's Raw Bone Meal (4046; 3597; 3197)	4.03	3.70	22.05	20.60
F. RYNVELD & SONS, New York, N. Y.				
Rynveld's Bone Meal Fertilizer (2580)	2.56	1.85	25.01	22.88
THE SMITH AGRICULTURAL CHEMICAL CO., Columbus, Ohio				
Sacco Bone Meal (2858)	1.83	1.00	30.16	28.00
STANDARD CHEMICAL WORKS, INC., Reading, Pa.				
Fine Bone Meal (2829)	2.73	2.46	24.06	23.00
SUMMERS FERTILIZER CO., INC., Baltimore, Md.				
Ground Bone Meal 3-50 (3705)	*2.13	2.46	28.98	22.89
SWACKS FERTILIZER CO., DuBois, Pa.				
Swacks' Bone Meal (3360; 4067)	2.88	2.47	26.18	22.00
SWIFT & COMPANY, Baltimore, Md.				
Swift's Bone Meal Fertilizer (3769)	2.95	2.47	25.31	22.00
Swift's 1 and 29 Bone Fertilizer (2848)	1.47	1.00	29.91	29.00
Swift's 1 and 29 Bone Fertilizer (3301)	1.67	1.00	*28.06	29.00
Swift's 1 and 29 Bone Fertilizer (3279)	2.14	1.00	*28.06	29.00
I. P. THOMAS & SON CO., Philadelphia, Pa.				
Pure Ground Bone (2972)	2.57	2.45	24.38	23.00
F. W. TUNNELL & CO., INC., Philadelphia, Pa.				
Pure Ground Bone (3887)	2.76	2.46	26.06	23.00
VIRGINIA-CAROLINA CHEMICAL CORPORATION, Baltimore, Md.				
Fine Ground Bone (3076)	2.86	2.47	23.92	22.50
Pure Raw Bone (3701)	3.58	3.70	24.45	20.60
YORK CHEMICAL WORKS, York, Pa.				
Dempwolf's Pure Ground Bone (4358; 2437)	2.71	2.46	25.95	23.00
Average	3.10	----	24.60	----

*Deficient

TABLE V. SUPERPHOSPHATE AND LIME PHOSPHATE FERTILIZERS—FURNISHING PHOSPHORIC ACID

MANUFACTURER AND BRAND NAME	PHOSPHORIC ACID					
	Total		Available		Insoluble	
	Found	Guar.	Found	Guar.	Found	Guar.
	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.
SUPERPHOSPHATE FERTILIZERS						
THE AMERICAN AGRICULTURAL CHEMICAL CO., New York, N. Y.						
AA 16% Superphosphate (4387; 2522; 4224; 4764; 4297; 4217; 2630; 2550; 3289; 2688; 4753; 4723; 3390; 3541; 4474; 3731; 4601)	18.51	16.50	17.21	16.00	1.30	0.50
AA 20% Superphosphate (2521; 4486; 4805; 3285; 3325; 2627; 4756; 3423)	22.02	20.50	20.85	20.00	1.17	0.50
Bowker's 16% Superphosphate (4318; 3165; 3961)	18.58	16.50	17.21	16.00	1.37	0.50
E. Frank Coe's 16% Superphosphate (4221)	18.15	16.50	16.60	16.00	1.55	0.50
Hese 16% Superphosphate (2696; 4289)	18.78	16.50	17.49	16.00	1.29	0.50
Lister's 16% Superphosphate (4367; 3050; 3578; 4593; 3934)	18.70	16.50	17.18	16.00	1.52	0.50
Patapeco 16% Superphosphate (2706; 4285)	18.88	16.50	17.63	16.00	1.25	0.50
ARMOUR FERTILIZER WORKS, Baltimore, Md.						
Armour's Big Crop Superphosphate 16% (3899; 4688; 3293; 2724;2757; 2934; 2751; 3095; 4323; 4603)	17.51	16.50	17.06	16.00	0.45	0.50
Armour's Big Crop Superphosphate 20% (4327)	18.56	20.50	*17.92	20.00	0.64	0.50
Armour's Big Crop Superphosphate 20% (2873; 3162; 4236; 3292; 4029)	21.46	20.50	20.89	20.00	0.57	0.50
BALTIMORE FERTILIZER CO., Baltimore, Md.						
Honest 16% Superphosphate (2479; 4161)	17.76	16.50	17.13	16.00	0.63	0.50
BAUGH & SONS COMPANY, Philadelphia, Pa.						
Baughphos The Ideal 16% Superphosphate (4640; 2488; 4373; 4572; 3633; 4237; 4704; 3120; 4690; 2773; 4791; 4817; 2533; 3553; 4484; 2879)	18.81	16.00	17.58	16.00	1.23	----
Baughphos The Ideal 20% Superphosphate (4585; 2731; 3117; 4071; 3799; 4485)	21.83	20.00	20.90	20.00	0.93	----
W. S. CAPLES & SON, Johnstown, Pa.						
Cambria Superphosphate (3561; 4494; 4002)	19.42	18.00	18.94	17.00	0.48	1.00
CARLISLE FERTILIZER WORKS, Carlisle, Pa.						
Carlisle 16% Superphosphate (2467; 4156)	17.92	16.50	17.41	16.00	0.51	0.50
CENTRAL CHEMICAL COMPANY, Hagerstown, Md.						
Gro-All Dissolved Phosphate 16% (4587; 4303; 3993; 4037; 3804; 2554; 4204; 3434; 4467)	17.86	16.50	16.86	16.00	1.00	0.50
Gro-All Dissolved Phosphate 20% (3040; 4588; 4038; 3438)	22.02	20.50	21.19	20.00	0.83	0.50
COOPERATIVE G. L. F. EXCHANGE, INC., Rochester, N. Y.						
G. L. F. 16% Superphosphate (3870; 4048; 3455)	18.32	16.50	17.73	16.00	0.59	0.50
AMOS EBY & COMPANY, Leaman Place, Pa.						
Eby Superphosphate (2566)	18.98	17.00	17.90	16.00	1.08	1.00
FARMERS FERTILIZER WORKS, Elizabethtown,Pa.						
Acid Phosphate 16% (2456; 4145; 4649)	17.49	16.00	17.17	16.00	0.32	----
JOSEPH R. GAWTHROP, Kennett Square, Pa.						
Superphosphate 18% (3657)	21.80	18.00	20.34	18.00	1.46	----
GIPE FERTILIZER WORKS, Lebanon, Pa.						
Gipe's 16% Superphosphate (3538)	18.74	16.50	18.46	16.00	0.28	0.50
GRIFFITH & BOYD CO., Baltimore, Md.						
High Grade 16% Acid Phosphate (4259; 3149; 4089; 3378; 4758; 3019; 4483; 4471; 2558; 4210)	18.26	16.50	17.63	16.00	0.63	0.50
20% Acid Phosphate (3150; 4461; 3567; 2919)	21.52	20.50	20.96	20.00	0.56	0.50
THE HUBBARD FERTILIZER COMPANY, Baltimore, Md.						
Hubbard's Superphosphate 16% (3675; 4257; 4197; 3070;4337; 2681; 3341; 3288)	17.86	16.50	16.90	16.00	0.96	0.50
Hubbard's Superphosphate 20% (3828; 4272; 2833; 3287)	21.80	20.50	20.60	20.00	1.20	0.50
Hubbard's Superphosphate 20% (4338)	19.72	20.50	*19.44	20.00	0.28	0.50
INDEPENDENT MANUFACTURING CO., Philadelphia, Pa.						
Independent's 16% Superphosphate (2818)	18.24	16.00	17.58	16.00	0.66	----
INTERNATIONAL AGRICULTURAL CORPORATION, Buffalo, N. Y.						
International 16% Superphosphate (3752)	18.62	17.00	17.30	16.00	1.32	1.00
THE JARECKI CHEMICAL CO., Sandusky, Ohio						
Jarecki's 16% Superphosphate (3976; 2887)	18.00	16.50	17.44	16.00	0.56	0.50
Jarecki's 20% Superphosphate (3975)	21.69	20.50	21.09	20.00	0.60	0.50
KEYSTONE GRANGE EXCHANGE, INC., Harrisburg, Pa.						
Granger's 16% Acid Phosphate (3584; 3107)	18.87	16.50	17.57	16.00	1.30	0.50
Granger's 20% Acid Phosphate (3104; 4074)	22.21	20.50	21.53	20.00	0.68	0.50
KOLLER FERTILIZER CO., Glen Rock, Pa.						
Koller's High Grade Superphosphate 16% (2594;4432)	18.19	16.50	17.64	16.00	0.55	0.50
LANCASTER BONE FERTILIZER CO., Lancaster, Pa.						
Conestoga Brand 16% Superphosphate (4243; 2445; 2638)	17.63	16.00	16.88	16.00	0.75	----
LEBANON FERTILIZER WORKS, Lebanon, Pa.						
Levan's Superphosphate 16% (2616; 4174)	18.57	17.00	17.39	16.00	1.18	1.00
FRED E. LORD, Espy, Pa.						
16% Superphosphate (2998; 4558)	18.64	16.50	18.11	16.00	0.53	0.50

*Deficient

TABLE V. SUPERPHOSPHATE AND LIME PHOSPHATE FERTILIZERS—FURNISHING PHOSPHORIC ACID

MANUFACTURER AND BRAND NAME	PHOSPHORIC ACID					
	Total		Available		Insoluble	
	Found	Guar.	Found	Guar.	Found	Guar.
	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.
FREDERICK MEHRING FERTILIZER WORKS, INC., Keymar, Md.						
Superphosphate 16% (4438)	18.34	16.50	17.14	16.00	1.20	0.50
THE MILLER FERTILIZER CO., Baltimore, Md.						
Miller's Superphosphate 16% (4773)	16.39	16.50	*15.63	16.00	0.76	0.50
Miller's Superphosphate 16% (4230; 2496; 4658; 4390;3055; 4612; 4061; 3458)	17.83	16.50	16.68	16.00	1.15	0.50
Miller's Superphosphate 20% (3460; 3817)	21.62	20.50	20.24	20.00	1.38	0.50
MORTON FERTILIZER CO., Baltimore, Md.						
Morton's 16% Acid Phosphate (4421; 4425)	17.54	17.00	16.08	16.00	1.46	1.00
G. OBER & SONS CO., Baltimore, Md.						
Ober's High Grade Superphosphate (4478; 2845; 4441; 2565; 3313; 3915)	18.86	17.00	17.11	16.00	1.75	1.00
OYLER & SPANGLER FERTILIZER WORKS, INC., Gettysburg, Pa.						
O & S 16% (2492; 4170)	17.70	16.50	16.52	16.00	1.18	0.50
PATUXENT GUANO CO., Baltimore, Md.						
Patuxent High Grade Acid Phosphate 16% (3098; 2509; 2938; 4696)	17.51	17.00	16.84	16.00	0.67	1.00
PIEDMONT MT. AIRY GUANO CO., Baltimore, Md.						
Piedmont's Superphosphate 16% (4316)	17.31	16.50	16.07	16.00	1.24	0.50
RASIN MONUMENTAL CO., Baltimore, Md.						
Rasin's 16% Superphosphate (4329; 3865; 2986; 4490; 3074)	17.68	17.00	16.87	16.00	0.81	1.00
Rasin's 20% Superphosphate (3491)	22.39	21.00	21.41	20.00	0.98	1.00
Rasin's 20% Superphosphate (3078)	19.25	21.00	*18.45	20.00	0.80	1.00
READING BONE FERTILIZER CO., Reading, Pa.						
16% Clear Acid Phosphate (2704; 3795)	18.19	17.00	17.57	16.00	0.62	1.00
ROBERT A. REICHARD INC., Allentown, Pa.						
Reichard's 16% Acid Phosphate (3513)	18.61	17.00	17.79	16.00	0.82	1.00
F. S. ROYSTER GUANO COMPANY, Baltimore, Md.						
Royster's 16% Superphosphate (2789; 3662; 4228; 2712; 3893; 4779; 4759; 4451; 2867; 4378)	18.44	16.50	17.27	16.00	1.17	0.50
Royster's 20% Superphosphate (4335; 4682; 3595; 3021)	22.53	20.50	21.61	20.00	0.92	0.50
Royster's 20% Superphosphate (3986)	19.07	20.50	*18.24	20.00	0.83	0.50
SHIPPENSBURG FERTILIZER CO., Shippensburg, Pa.						
Old Reliable Acid Phosphate (2472; 4362)	17.34	16.50	16.78	16.00	0.56	0.50
M. L. SHOEMAKER & CO., INC., Philadelphia, Pa.						
Shoemaker's Swift Sure 16% Acid Phosphate (4536)	18.65	17.00	17.41	16.00	1.24	1.00
THE SMITH AGRICULTURAL CHEMICAL CO., Columbus, Ohio						
Sacco 16% Superphosphate (2856; 4107)	18.05	----	16.60	16.00	1.45	----
Sacco 20% Superphosphate (3306)	21.70	----	20.94	20.00	0.76	----
SOMERSET COUNTY FERTILIZER WORKS, Somerset, Pa.						
Bear Brand Superphosphate (4506)	17.08	17.00	*14.28	16.00	2.80	1.00
STANDARD CHEMICAL WORKS, INC., Reading, Pa.						
Reading 16% Clear Acid Phosphate (2668; 4709; 2825; 3738; 3788)	18.00	17.00	17.40	16.00	0.60	1.00
STANDARD WHOLESALE PHOSPHATE & ACID WORKS, INC., Baltimore, Md.						
16% Superphosphate (2949; 3910; 3384; 3157; 4369)	18.15	16.50	17.38	16.00	0.77	0.50
20% Superphosphate (3186; 2965; 4563)	21.98	20.50	21.17	20.00	0.81	0.50
SUMMERS FERTILIZER CO., INC., Baltimore, Md.						
Summer's Superphosphate 16% (4348; 2674; 2746; 4017; 3713; 2793; 2926)	18.42	16.50	17.67	16.00	0.75	0.50
Summer's Superphosphate 20% (4349; 4748; 2676; 2744; 3708)	22.15	20.50	21.59	20.00	0.56	0.50
SWACKS FERTILIZER COMPANY, DuBois, Pa.						
Swacks' Superphosphate 16% (3417; 4680; 3362; 4767)	18.05	16.50	17.52	16.00	0.53	0.50
Swacks' Superphosphate 20% (4191: 4123; 4026)	21.38	20.50	20.90	20.00	0.48	0.50
SWIFT & COMPANY, Baltimore, Md.						
Swift's Red Steer Superphosphate 0-16-0 (4196; 3298; 4785; 3275; 4751)	17.95	16.00	16.88	16.00	1.07	----
Swift's Red Steer Superphosphate 0-20-0 (4193; 3276)	21.97	20.00	20.64	20.00	1.33	----
Swift's 16% Superphosphate (2849; 2806; 4284; 4255; 2716; 2542; 3468; 3072; 4813; 3089)	17.76	16.00	17.02	16.00	0.74	----
I. P. THOMAS & SONS COMPANY, Philadelphia, Pa.						
16% Superphosphate (4442; 2974)	18.96	17.00	17.42	16.00	1.54	1.00
F. W. TUNNELL & CO., INC., Philadelphia, Pa.						
16% Acid Phosphate (3655; 3888)	19.16	17.00	18.00	16.00	1.16	1.00
VIRGINIA-CAROLINA CHEMICAL CORPORATION, New York, N. Y.						
V-C Phospho Tobacco 16% (2635; 4249)	18.63	17.00	17.91	16.00	0.72	1.00
V-C 16% Superphosphate (4683)	16.52	17.00	*15.80	16.00	0.72	1.00
V-C 16% Superphosphate (4450)	16.20	17.00	*15.80	16.00	0.40	1.00
V-C 16% Superphosphate (3303; 4789; 3185; 2780; 3042; 2634; 4253; 4352; 4325; 3624; 4598)	17.75	17.00	16.88	16.00	0.87	1.00
V-C 20% Superphosphate (3501; 3623; 3882)	21.73	21.00	20.69	20.00	1.04	1.00

*Deficient

TABLE V. SUPERPHOSPHATE AND LIME PHOSPHATE FERTILIZERS—FURNISHING PHOSPHORIC ACID

MANUFACTURER AND BRAND NAME	PHOSPHORIC ACID					
	Total		Available		Insoluble	
	Found	Guar.	Found	Guar.	Found	Guar.
	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.
YORK CHEMICAL WORKS, York, Pa.						
Dempwolf's Superphosphate 16% (3590; 4274; 3462; 4356; 4021; 2433; 4149)	18.28	16.00	17.79	16.00	0.49	----
Dempwolf's Superphosphate 20% (3594; 3824;2663; 3481; 4357; 2434; 4147)	22.26	20.00	21.90	20.00	0.36	----
Average	19.03	-----	18.11	-----	0.92	----
LIME PHOSPHATE FERTILIZERS						
THE AMERICAN AGRICULTURAL CHEMICAL CO., New York, N. Y.						
AA Basic Lime Phoephate (3004; 4567; 4008; 4298; 4447; 3171; 2549)	17.54	14.50	15.44	14.00	2.10	0.50
Lister's Lime Phosphate (2694; 4293)	17.77	14.50	15.55	14.00	2.22	0.50
BAUGH & SONS COMPANY, Philadelphia, Pa.						
Baugh's Lime and Phosphate (3845; 4642; 2484; 4371; 3013; 4571)	16.70	14.00	15.04	14.00	1.66	----
CARLISLE FERTILIZER WORKS, Carlisle, Pa.						
Carlisle Lime Phosphate (2466; 4155)	16.45	14.50	14.53	14.00	1.92	0.50
CENTRAL CHEMICAL CO., INC., Hagerstown, Md.						
Gro-All Carbo Lime Phosphate (4310)	14.68	15.00	*13.64	14.00	1.04	1.00
Gro-All Carbo Lime Phosphate (3108; 2551; 4207)	17.33	15.00	16.28	14.00	1.05	1.00
THE HUBBARD FERTILIZER CO., Baltimore, Md.						
Hubbard's Lime and Phosphate 14% (4699)	14.48	14.50	*13.44	14.00	1.04	0.50
LEBANON FERTILIZER WORKS, Lebanon, Pa.						
Levan's Lime Phosphate (2613; 4175)	16.25	15.00	15.43	14.00	0.82	1.00
RASIN MONUMENTAL CO., Baltimore, Md.						
Rasin's 14% Phospho Tobacco (3057; 2821)	16.41	15.00	15.70	14.00	0.71	1.00
VIRGINIA-CAROLINA CHEMICAL CORPORATION, Baltimore, Md.						
V-C Phosphate and Lime Mixture (3014; 4573;3902)	16.25	15.00	14.44	14.00	1.81	1.00
YORK CHEMICAL WORKS, York, Pa.						
Dempwolf's Lime Phosphate (3262; 2436; 4148)	16.57	15.00	15.64	14.00	0.93	1.00
Average	16.76	-----	15.21	-----	1.55	----

*Deficient

TABLE VI. ROCK AND POTASH FERTILIZERS—FURNISHING PHOSPHORIC ACID AND POTASH

MANUFACTURER AND BRAND NAME	PHOSPHORIC ACID						POTASH		
	Total		Available		Insoluble				
	Found	Guar.	Found	Guar.	Found	Guar.	Found	Guar.	As Muriate
	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.
THE AMERICAN AGRICULTURAL CHEMICAL CO., New York, N. Y.									
AA Victory Mixture (3864; 2512; 4388; 4583; 4216; 2628; 3873; 3180; 4675; 2661; 4473; 3819)	13.68	12.50	12.79	12.00	0.89	0.50	5.17	5.00	5.17
AA XXX Mixture (3914; 2516; 4093)	11.62	10.50	10.69	10.00	0.93	0.50	10.43	10.00	10.43
AA XXX Mixture (3179)	11.51	10.50	10.71	10.00	0.80	0.50	*9.12	10.00	9.12
Lister's Atlas Mixture (4134; 4611; 3575; 4291)	14.19	12.50	12.85	12.00	1.34	0.50	4.99	5.00	4.99
ARMOUR FERTILIZER WORKS, Baltimore, Md.									
Armour's Big Crop 0-10-10 Fertilizer (3998)	11.11	10.50	10.75	10.00	0.36	0.50	10.01	10.00	10.01
Armour's Big Crop 0-12-5 Fertilizer (4595; 3906; 3759)	13.18	12.50	12.62	12.00	0.56	0.50	5.22	5.00	5.22
BALTIMORE FERTILIZER CO., Baltimore, Md.									
Honest 0-12-5 (2478; 4160)	14.34	12.50	13.71	12.00	0.63	0.50	4.90	5.00	4.90
BAUGH & SONS COMPANY, Philadelphia, Pa.									
Baugh's 10-10 Phosphate and Potash Mixtures (3684)	12.03	10.00	11.19	10.00	0.84	-----	10.71	10.00	10.71
Baugh's 10-10 Phosphate and Potash Mixtures (3357)	11.86	10.00	10.84	10.00	1.02	-----	*9.40	10.00	9.40
Baugh's 12-5 Phosphate and Potash Mixture (4639; 4578; 2481; 4376; 3267; 3124; 2957)	13.49	12.00	12.50	12.00	0.99	-----	5.38	5.00	5.38
Baugh's 12-5 Phosphate and Potash Mixture (2878)	14.03	12.00	13.27	12.00	0.76	-----	*4.51	5.00	4.51
CARLISLE FERTILIZER WORKS, INO., Carlisle, Pa.									
Carlisle 0-12-5 (2469; 4159)	12.92	12.50	12.19	12.00	0.73	0.50	5.88	5.00	5.88
CENTRAL CHEMICAL COMPANY, Hagerstown, Md.									
Gro-All Potash Special 0-12-5 (3037; 4311; 3897; 2553; 3090; 4202; 3436; 4466)	13.31	12.50	12.65	12.00	0.66	0.50	5.25	5.00	5.25
Gro-All Potash Special 0-12-5 (4586)	12.32	12.50	*10.64	12.00	1.68	0.50	5.20	5.00	5.20
Gro-All Potash Special 0-12-5 (3215)	13.87	12.50	13.17	12.00	0.70	0.50	*4.20	5.00	4.20
Gro-All Potash Special 0-12-5 (4504)	12.12	12.50	*11.32	12.00	0.80	0.50	5.22	5.00	5.22
AMOS EBY & COMPANY, Leaman Place, Pa.									
Eby Farmers Mixturs (2568)	13.98	13.00	13.50	12.00	0.48	1.00	6.23	5.00	6.23
FARMERS FERTILIZER WORKS, Elizabethtown, Pa.									
Farmers' Phosphate and Potash (2458; 4142)	13.25	12.00	12.95	12.00	0.30	-----	5.17	5.00	5.17
C. P. FOLLMER, Benton, Pa.									
12 and 5 Phosphate (4623)	13.56	12.50	13.40	12.00	0.16	0.50	5.10	5.00	5.10
GRIFFITH & BOYD COMPANY, Baltimore, Md.									
Special Grain Grower (2886; 3746; 3017; 4444; 2651)	12.98	12.50	12.54	12.00	0.44	0.50	5.22	5.00	5.22
Special Grain Grower (4261)	12.85	12.50	12.65	12.00	0.20	0.50	*4.62	5.00	4.62
XX Potash Manure (3148)	11.15	10.50	10.49	10.00	0.66	0.50	4.83	5.00	4.83
XX Potash Manure (4457)	10.20	10.50	*9.64	10.00	0.56	0.50	4.81	5.00	4.81
XX Potash Manure (3747)	11.01	10.50	10.67	10.00	0.34	0.50	*4.78	5.00	4.78
THE HUBBARD FERTILIZER CO., Baltimore, Md.									
Hubbard's 12-5 Alkaline (4132)	14.34	12.50	12.88	12.00	1.46	0.50	5.09	5.00	5.09
LANCASTER BONE FERTILIZER CO., INC., Lancaster, Pa.									
Conestoga Brand 12-5 (2441; 4815)	12.77	12.00	12.27	12.00	0.50	-----	5.15	5.00	5.15
LEBANON FERTILIZER WORKS, Lebanon, Pa.									
Levan's 0-10-10 (2614)	11.33	11.00	10.83	10.00	0.50	1.00	*9.04	10.00	9.04
Levan's 0-10-10 (4179)	11.67	11.00	10.91	10.00	0.76	1.00	*9.69	10.00	9.69
Levan's 0-12-5 (2609; 4180)	13.59	13.00	12.66	12.00	0.93	1.00	5.08	5.00	5.08

*Deficient

TABLE VI. ROCK AND POTASH FERTILIZERS—FURNISHING PHOSPHORIC ACID AND POTASH

MANUFACTURER AND BRAND NAME	PHOSPHORIC ACID						POTASH		
	Total		Available		Insoluble		Found	Guar.	As Muriate
	Found	Guar.	Found	Guar.	Found	Guar.			
	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.
FRED E. LORD, Espy, Pa.									
Columbia County Fall Special (2999; 4557)	13.82	12.50	13.02	12.00	0.80	0.50	6.03	5.00	6.03
THE MILLER FERTILIZER CO., Baltimore, Md.									
Miller's 12-5 (2714; 3679; 4231; 3555; 4370)	13.70	12.50	12.82	12.00	0.88	0.50	5.02	5.00	5.02
Miller's 12-5 (3850)	13.96	12.50	12.94	12.00	1.02	0.50	*4.78	5.00	4.78
MORTON FERTILIZER CO., Baltimore, Md.									
Morton's 12 and 5 (4616; 2659)	13.19	13.00	12.81	12.00	0.38	1.00	5.20	5.00	5.20
G. OBER & SONS COMPANY, Baltimore, Md.									
Ober's 12 and 5 Potash Compound (2562)	14.81	13.00	14.15	12.00	0.66	1.00	4.92	5.00	4.92
Ober's 12 and 5 Potash Compound (4248)	14.61	13.00	12.93	12.00	1.68	1.00	*4.43	5.00	4.43
Ober's 12 and 5 Potash Compound (3777)	12.73	13.00	*11.63	12.00	1.10	1.00	5.89	5.00	1.90
OYLER & SPANGLER FERTILIZER WORKS, INC., Gettysburg, Pa.									
O & S Potash Special (4383)	12.96	12.50	12.28	12.00	0.68	0.50	5.13	5.00	5.13
PATUXENT GUANO COMPANY, Baltimore, Md.									
Patuxent Potash Mixture (3441; 2510; 3260)	13.00	12.50	12.31	12.00	0.69	0.50	5.24	5.00	5.24
RASIN MONUMENTAL COMPANY, Baltimore, Md.									
Rasin's High Grade Potash Mixture (4651; 4614; 3054)	13.93	13.00	12.82	12.00	1.11	1.00	5.45	5.00	5.45
ROBERT A. REICHARD INC., Allentown, Pa.									
Reichard's Famous 12-5 (3514; 4524)	13.01	13.00	12.78	12.00	0.23	1.00	4.98	5.00	4.98
F. S. ROYSTER GUANO CO., Baltimore, Md.									
Royster's 10-10 Phosphate and Potash (3027; 3402)	11.75	10.50	10.88	10.00	0.87	0.50	10.68	10.00	10.68
Royster's 10-10 Phosphate and Potash (3420)	13.15	10.50	12.15	10.00	1.00	0.50	*9.57	10.00	9.57
Royster's 12-5 Phosphate and Potash (3261; 2930; 3026; 4576)	13.96	12.50	12.96	12.00	1.00	0.50	5.44	5.00	5.44
SHIPPENSBURG FERTILIZER CO., Shippensburg, Pa.									
Old Reliable Valley Special 12-5 (2473; 4365)	12.78	12.50	12.07	12.00	0.71	0.50	5.49	5.00	5.49
THE SMITH AGRICULTURAL CHEMICAL CO., Columbus, Ohio									
Sacco 0-14-4 (2853)	15.52	-----	14.72	14.00	0.80	-----	4.05	4.00	4.05
STANDARD CHEMICAL WORKS, INC., Reading, Pa.									
Standard Fertilizer 12-5 (4415)	12.43	13.00	11.87	12.00	0.56	1.00	5.37	5.00	5.37
Standard Fertilizer 12-5 (4034)	12.96	13.00	12.16	12.00	0.80	1.00	*4.64	5.00	4.64
STANDARD WHOLESALE PHOSPHATE & ACID WORKS, INC., Baltimore, Md.									
High Grade Phosphate and Potash (3155; 3733)	13.45	12.50	12.96	12.00	0.49	0.50	5.14	5.00	5.14
Phosphate and Potash Mixture (3912)	11.42	10.50	10.30	10.00	1.12	0.50	*9.56	10.00	9.56
SUMMERS FERTILIZER CO., INC., Baltimore, Md.									
Summer's 0-12-5 Fertilizer (2792)	13.47	12.50	12.61	12.00	0.86	0.50	5.39	5.00	5.39
Summer's 0-12-5 Fertilizer (2922)	13.84	12.50	12.82	12.00	1.02	0.50	*4.74	5.00	4.74
SWACKS FERTILIZER COMPANY, DuBois, Pa.									
Swacks' Phosphate and Potash (4041; 3177; 4069)	13.85	13.00	12.84	12.00	1.01	1.00	5.36	5.00	5.36
SWIFT & COMPANY, Baltimore, Md.									
Swift's Red Steer 0-10-10 (3764)	11.75	10.00	11.17	10.00	0.58	-----	10.12	10.00	10.12
Swift's Red Steer 0-12-5 (2807; 3125; 2915; 4314)	13.40	12.00	12.75	12.00	0.65	-----	5.37	5.00	5.37

*Deficient

TABLE VI. ROCK AND POTASH FERTILIZERS—FURNISHING PHOSPHORIC ACID AND POTASH

MANUFACTURER AND BRAND NAME	PHOSPHORIC ACID						POTASH		
	Total		Available		Insoluble				
	Found	Guar.	Found	Guar.	Found	Guar.	Found	Guar.	As Muriate
	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.
I. P. THOMAS & SON COMPANY, Philadelphia, Pa.									
Dairymen's Special 0-10-10 (4552)	12.21	11.00	10.73	10.00	1.48	1.00	*9.48	10.00	6.50
Potash Mixture 0-12-5 (3403; 4016; 2969)	14.96	13.00	13.06	12.00	1.90	1.00	5.36	5.00	5.36
VIRGINIA-CAROLINA CHEMICAL CORPORATION, New York, N. Y.									
V-C High Grade Potash Mixture (3878; 3500; 3732)	14.06	13.00	12.65	12.00	1.41	1.00	5.33	5.00	5.33
V-C Special Potash Mixture (4326)	12.26	11.00	11.02	10.00	1.24	1.00	4.40	4.00	4.40
YORK CHEMICAL WORKS, York, Pa.									
Dempwolf's Twelve and Five (4269; 3463; 2425; 4146)	13.70	12.00	13.12	12.00	0.58	-----	5.54	5.00	5.54
Average	13.28	-----	12.45	-----	0.83	-----	5.76	----	----

*Deficient

TABLE VII. MISCELLANEOUS FERTILIZERS

MANUFACTURER AND BRAND NAME	NITROGEN		PHOSPHORIC ACID						POTASH		
			Total		Available		Insoluble				
	Found	Guar.	Found	Guar.	Found	Guar.	Found	Guar.	Found	Guar.	As Muriate
	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.
NITRATE OF SODA											
THE AMERICAN AGRICULTURAL CHEMICAL CO., New York, N. Y. Nitrate of Soda (4059; 2525; 3412; 3049; 3464)	15.81	15.00	-----	-----	-----	-----	-----	-----	-----	-----	-----
ANGLO-CHILEAN NITRATE SALES CORPORATION, New York, N. Y. Champion Brand Chilean Nitrate of Soda (2805; 3551; 3213; 3444; 4472; 2778; 2815)	15.96	16.00	-----	-----	-----	-----	-----	-----	-----	-----	-----
ASSOCIATED CHEMICAL COMPANY, Hagerstown, Md. Associated Nitrate of Soda (2684; 3359; 3641; 2936;3273)	15.90	15.00	-----	-----	-----	-----	-----	-----	-----	-----	-----
THE BARRETT COMPANY, New York, N. Y. Arcadian Nitrate of Soda (3519; 3407; 3144; 2631; 2693; 4664; 2650; 4137; 2515; 2797; 2438)	16.09	16.00	-----	-----	-----	-----	-----	-----	-----	-----	-----
BAUGH & SONS COMPANY, Baltimore, Md. Nitrate of Soda (3269; 3683)	16.01	15.23	-----	-----	-----	-----	-----	-----	-----	-----	-----
KEYSTONE GRANGE EXCHANGE, Harrisburg, Pa. Granger's Nitrate of Soda (2756)	16.14	14.80	-----	-----	-----	-----	-----	-----	-----	-----	-----
FRED E. LORD, Espy, Pa. Nitrate of Soda (2995)	15.64	15.00	-----	-----	-----	-----	-----	-----	-----	-----	-----
F. S. ROYSTER GUANO CO., Baltimore, Md. Royster's Nitrate of Soda (2785; 3421)	16.21	15.00	-----	-----	-----	-----	-----	-----	-----	-----	-----
STANDARD CHEMICAL WORKS, INC., Reading, Pa. Nitrate of Soda (2671; 2824; 3739)	16.04	15.00	-----	-----	-----	-----	-----	-----	-----	-----	-----
STANDARD WHOLESALE PHOSPHATE & ACID WORKS, INC., Baltimore, Md. Nitrate of Soda (2953)	16.12	15.00	-----	-----	-----	-----	-----	-----	-----	-----	-----
SUMMERS FERTILIZER CO., INC., Baltimore, Md. Summers' Nitrate Soda (2747)	15.34	14.80	-----	-----	-----	-----	-----	-----	-----	-----	-----
SWIFT & COMPANY, Baltimore, Md. Swift's Nitrate of Soda (3766; 2544; 3754; 2830)	15.85	14.82	-----	-----	-----	-----	-----	-----	-----	-----	-----
I. P. THOMAS & SON CO., Philadelphia, Pa. Nitrate of Soda (2973)	15.80	15.00	-----	-----	-----	-----	-----	-----	-----	-----	-----
F. W. TUNNELL & CO., INC., Philadelphia, Pa. Nitrate of Soda (3890)	15.84	14.76	-----	-----	-----	-----	-----	-----	-----	-----	-----
VIRGINIA-CAROLINA CHEMICAL CORPORATION, Baltimore, Md. Nitrate of Soda (2943; 2988; 3626)	15.98	14.80	-----	-----	-----	-----	-----	-----	-----	-----	-----
Average	15.96	----	-----	-----	-----	-----	-----	-----	-----	-----	-----
SULPHATE OF AMMONIA											
THE AMERICAN AGRICULTURAL CHEMICAL CO., New York, N. Y. Sulphate of Ammonia (3981; 4665)	20.65	20.15	-----	-----	-----	-----	-----	-----	-----	-----	-----
ARMOUR FERTILIZER WORKS, Baltimore, Md. Sulphate of Ammonia (2764)	20.60	20.56	-----	-----	-----	-----	-----	-----	-----	-----	-----

TABLE VII. MISCELLANEOUS FERTILIZERS

MANUFACTURER AND BRAND NAME	NITROGEN		PHOSPHORIC ACID						POTASH		
			Total		Available		Insoluble				
	Found	Guar.	Found	Guar.	Found	Guar.	Found	Guar.	Found	Guar.	As Muriate
	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.
ASSOCIATED CHEMICAL COMPANY, Baltimore, Md. Associated Sulphate of Ammonia (3217; 3643)	20.94	20.56	-----	-----	-----	-----	-----	-----	-----	-----	-----
THE BARRETT COMPANY, New York, N. Y. Arcadian Sulphate of Ammonia (3592; 4359; 3719; 3886; 2439)	20.87	20.56	-----	-----	-----	-----	-----	-----	-----	-----	-----
BAUGH & SONS COMPANY, Philadelphia, Pa. Sulphate of Ammonia (3848)	20.64	20.57	-----	-----	-----	-----	-----	-----	-----	-----	-----
GRIFFITH & BOYD COMPANY, Baltimore, Md. Sulphate of Ammonia (3152; 3810)	20.32	20.18	-----	-----	-----	-----	-----	-----	-----	-----	-----
KOPPERS PRODUCTS CO., Pittsburgh, Pa. Kopper's Velvet Lawn Sulphate of Ammonia (2579)	20.78	20.75	-----	-----	------	-----	-----	-----	-----	-----	-----
FRED E. LORD, Espy, Pa. Sulphate of Ammonia (2996; 4561)	21.11	20.00	-----	-----	-----	-----	-----	-----	-----	-----	-----
ROBERT A. REICHARD, INC., Allentown, Pa. Sulphate of Ammonia (3518)	21.02	20.50	-----	-----	-----	-----	-----	-----	-----	-----	-----
F. S. ROYSTER GUANO CO., Baltimore, Md. Royster's Sulphate of Ammonia (3598)	20.82	20.56	-----	-----	-----	-----	-----	-----	-----	-----	-----
SEARS, ROEBUCK & CO., Scranton, Pa. Sulphate of Ammonia (2576)	20.78	20.75	-----	-----	-----	-----	-----	-----	-----	-----	-----
STANDARD CHEMICAL WORKS, INC., Reading, Pa. Sulphate of Ammonia (3585)	21.02	20.50	-----	-----	-----	-----	-----	-----	-----	-----	-----
STANDARD WHOLESALE PHOSPHATE & ACID WORKS, INC., Baltimore, Md. Sulphate of Ammonia (2890; 2952)	21.11	20.56	-----	-----	------	-----	-----	-----	-----	-----	-----
SUMMERS FERTILIZER CO., INC., Baltimore, Md. Sulphate of Ammonia (3367; 2783)	21.14	20.56	-----	-----	-----	-----	-----	-----	-----	-----	-----
SWACKS FERTILIZER COMPANY, DuBois, Pa. Sulphate of Ammonia (3364; 4024)	21.17	20.50	-----	-----	-----	-----	-----	-----	-----	-----	-----
SWIFT & COMPANY, Baltimore, Md. Sulphate of Ammonia (3767; 3223)	21.35	20.56	-----	-----	-----	-----	-----	-----	-----	-----	-----
VIRGINIA-CAROLINA CHEMICAL CORPORATION, Baltimore, Md. Sulphate of Ammonia (3702; 3075)	20.80	20.50	-----	-----	-----	-----	-----	-----	-----	-----	-----
Average	20.80	-----	-----	-----	----	-----	-----	-----	----	----	-----
GROUND BLOOD											
BAUGH & SONS COMPANY, Philadelphia, Pa. Ground Blood (2775)	13.22	13.15	-----	-----	-----	-----	-----	-----	-----	-----	-----
TANKAGE											
ASSOCIATED CHEMICAL COMPANY, Baltimore, Md.											
Associated Animal Tankage (2719)	5.61	5.75	13.34	9.15	-----	-----	-----	-----	-----	-----	-----
Associated Animal Tankage (3474)	6.39	5.75	*5.39	9.15	-----	-----	-----	-----	-----	-----	-----

*Deficient

TABLE VII. MISCELLANEOUS FERTILIZERS

MANUFACTURER AND BRAND NAME	NITROGEN		PHOSPHORIC ACID						POTASH		
			Total		Available		Insoluble				
	Found	Guar.	Found	Guar.	Found	Guar.	Found	Guar.	Found	Guar.	As Muriate
	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.
LEBANON FERTILIZER WORKS, Lebanon, Pa											
Levan's Animal Tankage (2617)	5.92	5.76	*8.25	9.15	-----	-----	-----	-----	-----	-----	-----
FRED E. LORD, Espy, Pa.											
Fertilizer Tankage (2991; 4560)	7.24	6.16	10.53	9.00	-----	-----	-----	-----	-----	-----	-----
JOSEPH OBERT CO., INC., Lehighton, Pa.											
Tankage (2905)	*5.55	6.27	14.68	12.72	-----	-----	-----	-----	-----	-----	-----
STANDARD WHOLESALE PHOSPHATE & ACID WORKS, INC., Baltimore, Md.											
Ground Animal Tankage 9% (2950)	*6.87	7.40	9.55	9.15	-----	-----	-----	-----	-----	-----	-----
I. P. THOMAS & SON COMPANY, Philadelphia, Pa.											
Bone Tankage (2968)	*5.45	5.75	10.01	9.15	-----	-----	-----	-----	-----	-----	-----
UNITED HOME DRESSED MEAT CO., Altoona, Pa.											
Dry Tankage (4023; 4477)	6.37	6.00	15.54	12.00	-----	-----	-----	-----	-----	-----	-----
VIRGINIA-CAROLINA CHEMICAL CORPORATION, New York, N. Y.											
Ground Tankage (3398)	7.78	7.41	6.19	4.00	-----	-----	-----	-----	-----	-----	-----
VOGT RENDERING WORKS, Danville, Pa.											
Fertilizer Tankage (3003)	7.93	-----	9.27	-----	-----	-----	-----	-----	-----	-----	-----
F. L. WINNER, Lock Haven, Pa.											
Winner's Tankage (3136)	6.51	6.50	13.18	12.00	-----	-----	-----	-----	-----	-----	-----
Average	6.56	----	10.92	----	-----	-----	-----	-----	-----	-----	-----
KAINIT											
ASSOCIATED CHEMICAL COMPANY, Baltimore, Md.											
Associated Kainit 14% (3134)	-----	-----	-----	-----	-----	-----	-----	-----	13.94	14.00	13.94
Associated Kainit 14% (3801)	-----	-----	-----	-----	-----	-----	-----	-----	*13.77	14.00	13.77
I. P. THOMAS & SON COMPANY, Philadelphia, Pe											
Kainit (2976)	-----	-----	-----	-----	-----	-----	-----	-----	15.51	14.00	15.51
Average	----	----	----	----	----	-----	-----	-----	14.41	-----	-----
MURIATE OF POTASH											
THE AMERICAN AGRICULTURAL CHEMICAL CO., New York, N. Y.											
Muriate of Potash (3913; 4058; 3138; 4663)	-----	-----	-----	-----	-----	-----	-----	-----	48.66	48.00	48.66
Muriate of Potash (2698)	-----	-----	-----	-----	-----	-----	-----	-----	*47.14	48.00	47.14
BAUGH & SONS COMPANY, Philadelphia, Pa.											
Muriate of Potash (4241; 2777)	-----	-----	-----	-----	-----	-----	-----	-----	50.46	48.00	50.46
FRED E. LORD, Espy, Pa.											
Muriate of Potash (2994)	-----	-----	-----	-----	-----	-----	-----	-----	51.80	50.00	51.80
N. V. POTASH EXPORT MY. AMSTERDAM HOLLAND, Baltimore, Md.											
Muriate of Potash (3591; 3153; 3046; 3358; 4454; 2440)	-----	-----	-----	-----	-----	-----	-----	-----	50.31	48.00	50.31
Muriate of Potash (3762)	-----	-----	-----	-----	-----	-----	-----	-----	*45.41	48.00	45.41
Muriate of Potash (3818)	-----	-----	-----	-----	-----	-----	-----	-----	*47.72	48.00	47.72
STANDARD CHEMICAL WORKS, INC., Reading, Pa.											
Muriate of Potash (2670)	-----	-----	-----	-----	-----	-----	-----	-----	*49.32	50.00	49.32
Muriate of Potash (3740)	-----	-----	-----	-----	-----	-----	-----	-----	*49.64	50.00	49.64
Muriate of Potash (3586)	-----	-----	-----	-----	-----	-----	-----	-----	*49.69	50.00	49.69

*Deficient

TABLE VII. MISCELLANEOUS FERTILIZERS

MANUFACTURER AND BRAND NAME	NITROGEN		PHOSPHORIC ACID						POTASH		
	Found	Guar.	Total		Available		Insoluble		Found	Guar.	As Muriate
			Found	Guar.	Found	Guar.	Found	Guar.			
	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.
STANDARD WHOLESALE PHOSPHATE & ACID WORKS, INC., Baltimore, Md.											
Muriate of Potash (2954)	-----	-----	-----	-----	-----	-----	-----	-----	48.16	48.00	48.16
SUMMERS FERTILIZER CO., INC., Baltimore, Md.											
Muriate of Potash (3366)	-----	-----	-----	-----	-----	-----	-----	-----	51.00	50.00	51.00
Muriate of Potash (2790)	-----	-----	-----	-----	-----	-----	-----	-----	*48.55	50.00	48.55
SWACKS FERTILIZER CO., DuBois, Pa.											
Muriate of Potash (3376; 4025)	-----	-----	-----	-----	-----	-----	-----	-----	50.92	50.00	50.92
SWIFT & COMPANY, Baltimore, Md.											
Muriate of Potash (3768; 3221)	-----	-----	-----	-----	-----	-----	-----	-----	51.82	48.00	51.82
VIRGINIA-CAROLINA CHEMICAL CORPORATION, Baltimore, Md.											
Muriate of Potash (3703; 2987)	-----	-----	-----	-----	-----	-----	-----	-----	49.85	48.00	49.85
Average	-----	-----	-----	-----	-----	-----	-----	-----	49.68	-----	-----
SULPHATE OF POTASH											
N. V. POTASH EXPORT MY. AMSTERDAM HOLLAND, Baltimore, Md.											
Sulphate of Potash (3382)	-----	-----	-----	-----	-----	-----	-----	-----	50.20	-----	-----
STANDARD WHOLESALE PHOSPHATE & ACID WORKS, INC., Baltimore, Md.											
Sulphate of Potash (2955)	-----	-----	-----	-----	-----	-----	-----	-----	50.20	48.00	-----
Average	-----	-----	-----	-----	-----	-----	-----	-----	50.20	-----	-----
MISCELLANEOUS											
AMERICAN CYANAMID COMPANY, New York, N. Y.											
Aero Brand Cyanamid (2503)	22.44	21.00	-----	-----	-----	-----	-----	-----	-----	-----	-----
Ammo-Phos B (3456)	16.74	16.50	21.66	-----	21.26	20.00	0.40	-----	-----	-----	-----
COOPERATIVE G.L.F. EXCHANGE, INC., Rochester, N. Y.											
G. L. F. Ammoniated Superphosphate (3529; 3786; 3386)	1.89	1.64	20.35	18.00	19.05	17.50	1.30	0.50	-----	-----	-----
FARMERS FERTILIZER WORKS, Elizabethtown, Pa.											
Farmers' Top Dressing (2457)	7.84	6.97	8.74	6.50	8.58	6.00	0.16	0.50	-----	-----	-----
SEWERAGE COMMISSION, Milwaukee, Wis.											
Milwaukee Milorganite (4120)	5.27	5.00	2.70	2.75	2.00	2.00	0.70	0.75	-----	-----	-----
VIRGINIA-CAROLINA CHEMICAL CORPORATION, New York, N. Y.											
Ground Tobacco Stems (3399)	1.47	1.04	-----	-----	-----	-----	-----	-----	5.00	4.80	-----

*Deficient